ULAN COAL

GLENCORE

2025 Annual Review

Attachment C: 2025 Surface Water Monitoring

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Tables

1. Surface Water Monitoring Sites Sampling Method and Frequency

Table 1-1- Surface Water & EPL Monitoring Locations

Surface Water (SW) Monitoring Points & Location	Parameters	Sample Method & Frequency
(SW01) Goulburn River Upstream[1]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU) & flow	Monthly grab sample during flow & grab sample after >30mm rainfall event
(SW02) Goulburn River Downstream[1]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU) & flow	
(SW03) Ulan Ck. upstream of LDP6[2]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	
(SW04) Ulan Creek at Old Ulan[2, 4]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	
(SW05) Ulan Creek at Pleuger Road[3]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	
(SW06) Spring Gully[2]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	
(SW07) Bobadeen Creek[2]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	
(SW08) Curra Creek[2]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	
(SW09) Talbragar River[2]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	
(SW10) Mona Creek[2]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	
(SW11) Cockabutta Creek[2]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	
(SW12) Clean Water Diversion System – Central[3]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	Grab sample after >30mm rainfall event
(SW13) Clean Water Diversion Drain - Waratah[3]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	
(SW14) Clean Water Diversion Drain – Ulan West Box Cut[3]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	
(SW15) Clean Water Diversion System – Peanut Dam Discharge[3]	pH, EC (µS/cm), TSS (mg/L), TDS (mg/L), Turbidity (NTU)	

Notes: [1] Continuous monitoring by data logger for pH, EC and flow (continuous data logged every 15minutes for the 24hr period, reporting maximum, minimum and mean). [2] Continuous monitoring by data logger for flow. [3] Flow by observation. [4] Flow monitoring damaged by fallen tree

Table 1-2- EPL Licensed Discharge & Monitoring Locations

LDP	LDP Location	Parameters	Sample Method & Frequency
1	Effluent Storage Dam	pH, EC (µS/cm), TSS (mg/L) , Oil & Grease (mg/L), BOD (mg/L), Nitrogen (mg/L), Phosphorous (mg/L)	Monthly grab sample during discharge
2	Millers Dam	pH, EC (µS/cm), TSS (mg/L), Oil & Grease (mg/L), Iron (mg/L), Zinc (mg/L)	Daily grab sample during discharge
3	Rowans Dam to Ulan Creek	pH, EC (µS/cm), TSS (mg/L) , Oil & Grease (mg/L), Iron (mg/L), Sulphate (mg/L) , Zinc (mg/L)	Daily grab sample during discharge
4	Truckfill Dam	pH, EC (µS/cm), TSS (mg/L) , Oil & Grease (mg/L), Iron (mg/L), Sulphate (mg/L) , Zinc (mg/L)	Daily grab sample during discharge
6	Ulan Creek from Bobadeen WTF	pH, EC(µS/cm), TSS (mg/L), Turbidity	pH, EC and turbidity continuous during discharge , TSS weekly^
18*	Downstream Goulburn River Gauging Station	pH, EC(µS/cm)	pH, EC continuous
19	Ulan Creek from NWSD	pH, EC(µS/cm), TSS (mg/L), Turbidity	pH, EC and turbidity continuous during discharge, TSS weekly^
23	Ulan West Box Cut clean water diversion	pH, EC(µS/cm), TSS (mg/L)	Daily grab sample during discharge
33*	Upstream Goulburn River Gauging Station	EC(µS/cm)	EC continuous

Note: * LDP 18 and 33 are water quality monitoring points only and are not discharge points. ^ EPL varied in 2015 to special frequency, collection of a sample weekly when a discharge occurs on the scheduled sampling day.

2. LDP 6 Daily Average Results

		Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
LDP 6	Minimum	0.0	7.09	654.0	0.0	0.0
	Maximum	13.41	8.25	852.0	10.0	6.0
	Average	6.84	7.48	774.3	4.1	2.3

Table 2-1 LDP6 Daily Average Results 2025

Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
1/01/2025	5.320	7.57	790	2	
2/01/2025	6.318	7.62	765	1	
3/01/2025	9.177	7.77	740	1	
4/01/2025	7.153	7.65	757	1	
5/01/2025	7.202	7.57	766	1	
6/01/2025	7.312	7.51	767	1	
7/01/2025	9.000	7.53	769	1	
8/01/2025	9.283	7.68	773	1	
9/01/2025	9.038	7.30	767	0	2
10/01/2025	9.243	7.41	791	0	
11/01/2025	11.479	7.35	777	0	
12/01/2025	13.414	7.37	754	1	
13/01/2025	6.969	7.40	762	0	2
14/01/2025	9.024	7.47	771	1	
15/01/2025	6.215	7.44	767	0	
16/01/2025	9.146	7.68	766	0	
17/01/2025	9.136	7.50	735	0	
18/01/2025	9.363	7.34	735	0	
19/01/2025	13.142	7.37	775	0	
20/01/2025	9.060	7.62	789	1	4
21/01/2025	11.245	7.40	770	0	
22/01/2025	10.969	7.36	779	0	
23/01/2025	11.256	7.65	783	0	
24/01/2025	11.065	7.27	794	0	
25/01/2025	8.146	7.46	776	0	
26/01/2025	7.491	7.45	783	0	
27/01/2025	8.197	7.54	736	0	
28/01/2025	12.013	7.33	757	0	4
29/01/2025	11.247	7.44	774	0	
30/01/2025	10.993	7.78	795	0	
31/01/2025	6.082	7.47	805	0	
1/02/2025	7.984	7.49	775	0	
2/02/2025	9.007	7.48	774	0	
3/02/2025	10.171	7.46	762	0	
4/02/2025	10.229	7.49	766	0	
5/02/2025	6.215	7.49	756	0	
6/02/2025	6.191	7.62	727	0	
7/02/2025	6.042	7.79	708	0	
8/02/2025	8.087	8.25	738	1	
9/02/2025	8.005	8.22	756	0	
10/02/2025	10.034	7.94	743	0	

Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
11/02/2025	10.572	7.84	756	1	
12/02/2025	6.105	7.80	812	1	
13/02/2025	8.202	7.85	789	1	
14/02/2025	8.287	8.09	780	1	
15/02/2025	8.070	8.20	788	4	
16/02/2025	8.097	8.07	761	1	
17/02/2025	6.999	7.84	751	1	
18/02/2025	8.148	7.92	767	1	
19/02/2025	10.064	7.65	764	1	
20/02/2025	12.008	7.55	787	2	
21/02/2025	8.999	7.52	813	1	
22/02/2025	7.984	7.35	825	1	
23/02/2025	5.795	7.58	842	2	
24/02/2025	7.151	7.38	718	2	
25/02/2025	8.012	7.58	814	3	
26/02/2025	7.999	7.55	774	2	
27/02/2025	9.070	7.49	774	3	
28/02/2025	8.079	7.51	766	3	
1/03/2025	8.029	7.39	733	3	
2/03/2025	8.341	7.31	776	3	
3/03/2025	8.205	7.41	792	4	2
4/03/2025	9.235	7.31	805	3	
5/03/2025	9.985	7.25	801	1	
6/03/2025	8.356	7.36	775	0	
7/03/2025	8.127	7.47	797	0	
8/03/2025	5.492	7.55	783	0	
9/03/2025	8.179	7.53	724	0	
10/03/2025	9.048	7.44	766	0	0
11/03/2025	9.080	7.50	778	1	
12/03/2025	5.305	7.76	778	1	
13/03/2025	5.231	7.89	720	0	
14/03/2025	5.353	7.95	753	0	
15/03/2025	5.312	7.94	757	1	
16/03/2025	4.865	7.93	779	0	
17/03/2025	2.046	7.80	735	0	2
18/03/2025	2.056	7.99	674	0	
19/03/2025	2.730	7.74	692	0	
20/03/2025	2.277	7.71	692	1	
21/03/2025	5.756	7.52	689	1	
22/03/2025	5.093	7.34	683	2	
23/03/2025	7.108	7.45	726	1	
24/03/2025	5.528	7.50	757	2	1
25/03/2025	7.388	7.49	764	2	
26/03/2025	7.055	7.48	792	1	
27/03/2025	6.030	7.45	767	1	
28/03/2025	7.122	7.36	773	1	
29/03/2025	7.372	7.68	778	3	
30/03/2025	7.768	7.58	704	2	
31/03/2025	8.969	7.47	741	1	
1/04/2025	7.404	7.64	775	1	0
2/04/2025	7.150	7.67	754	1	

Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
3/04/2025	7.275	7.49	715	0	
4/04/2025	9.026	7.36	741	2	
5/04/2025	9.031	7.29	801	2	
6/04/2025	6.998	7.24	816	2	
7/04/2025	9.227	7.20	782	3	
8/04/2025	7.242	7.22	785	4	0
9/04/2025	7.062	7.13	781	5	
10/04/2025	7.060	7.20	764	7	
11/04/2025	8.159	7.15	786	7	
12/04/2025	7.016	7.21	788	7	
13/04/2025	8.204	7.23	770	5	
14/04/2025	7.055	7.22	774	5	2
15/04/2025	6.986	7.14	769	6	
16/04/2025	8.041	7.33	802	9	
17/04/2025	7.279	7.42	765	6	
18/04/2025	8.020	7.32	720	5	
19/04/2025	8.008	7.24	767	5	
20/04/2025	9.026	7.30	808	8	
21/04/2025	8.263	7.25	802	7	
22/04/2025	7.306	7.32	812	7	
23/04/2025	7.071	7.42	751	7	6
24/04/2025	6.091	7.63	702	5	
25/04/2025	5.320	7.55	696	4	
26/04/2025	5.000	7.53	702	4	
27/04/2025	5.195	7.60	715	4	
28/04/2025	4.020	7.60	674	3	
29/04/2025	6.380	7.46	690	3	
30/04/2025	8.104	7.31	699	5	
1/05/2025	9.069	7.29	773	0	1
2/05/2025	8.140	7.32	765	0	
3/05/2025	8.057	7.34	763	0	
4/05/2025	8.352	7.32	772	0	
5/05/2025	9.548	7.25	815	0	1
6/05/2025	8.086	7.40	778	0	
7/05/2025	8.047	7.49	765	5	
8/05/2025	9.180	7.42	753	4	
9/05/2025	7.985	7.49	820	5	
10/05/2025	8.255	7.52	804	7	
11/05/2025	8.289	7.47	727	6	
12/05/2025	8.991	7.41	813	7	2
13/05/2025	8.157	7.46	795	7	
14/05/2025	5.517	7.39	766	7	
15/05/2025	5.704	7.47	778	8	
16/05/2025	7.999	7.38	716	6	
17/05/2025	9.340	7.38	767	7	
18/05/2025	9.023	7.35	805	7	
19/05/2025	9.120	7.40	807	6	2
20/05/2025	8.147	7.34	817	6	
21/05/2025	8.014	7.31	804	7	
22/05/2025	8.137	7.27	804	5	
23/05/2025	8.299	7.26	765	7	

Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
24/05/2025	9.092	7.32	810	7	
25/05/2025	9.007	7.27	813	7	
26/05/2025	9.149	7.20	799	5	
27/05/2025	8.006	7.33	753	5	
28/05/2025	9.024	7.39	775	4	2
29/05/2025	9.251	7.37	776	4	
30/05/2025	10.087	7.26	800	4	
31/05/2025	9.361	7.21	791	5	
1/06/2025	10.120	7.17	799	3	
2/06/2025	9.143	7.16	805	4	
3/06/2025	10.343	7.19	813	3	2
4/06/2025	9.172	7.19	799	3	
5/06/2025	9.368	7.14	824	5	
6/06/2025	9.986	7.16	775	7	
7/06/2025	9.307	7.17	794	7	
8/06/2025	10.086	7.20	739	6	
9/06/2025	9.055	7.24	736	4	
10/06/2025	10.377	7.31	766	4	2
11/06/2025	3.423	7.33	796	2	
12/06/2025	6.587	7.50	757	5	
13/06/2025	10.261	7.37	730	4	
14/06/2025	9.272	7.25	815	5	
15/06/2025	10.110	7.16	799	5	
16/06/2025	7.990	7.15	759	4	
17/06/2025	5.120	7.09	753	3	2
18/06/2025	9.061	7.19	768	4	
19/06/2025	9.200	7.21	759	6	
20/06/2025	9.151	7.21	780	5	
21/06/2025	9.005	7.18	806	5	
22/06/2025	6.008	7.17	762	5	
23/06/2025	8.248	7.12	767	4	
24/06/2025	8.226	7.25	754	4	2
25/06/2025	9.185	7.40	781	5	
26/06/2025	8.972	7.48	773	4	
27/06/2025	8.037	7.29	795	6	
28/06/2025	9.025	7.24	771	4	
29/06/2025	8.017	7.12	707	3	
30/06/2025	5.948	7.10	730	4	
1/07/2025	9.020	7.15	768	3	2
2/07/2025	8.010	7.41	768	3	
3/07/2025	7.993	7.38	782	2	
4/07/2025	9.374	7.27	790	3	
5/07/2025	9.080	7.24	774	2	
6/07/2025	9.136	7.19	782	3	
7/07/2025	10.018	7.22	782	3	
8/07/2025	10.298	7.20	815	2	1
9/07/2025	10.466	7.25	778	3	
10/07/2025	8.153	7.28	783	1	
11/07/2025	7.998	7.39	793	7	
12/07/2025	8.461	7.32	726	6	
13/07/2025	8.333	7.28	771	6	

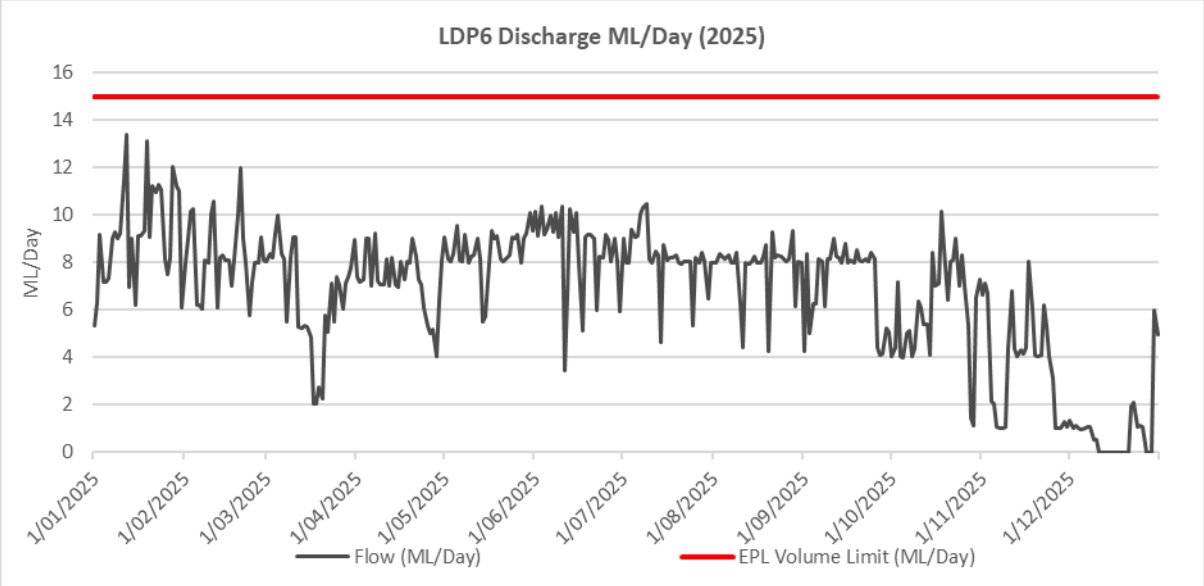
Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
14/07/2025	4.632	7.19	784	5	
15/07/2025	8.756	7.30	826	7	1
16/07/2025	8.079	7.32	732	3	
17/07/2025	8.188	7.31	798	3	
18/07/2025	8.196	7.30	805	3	
19/07/2025	8.302	7.31	767	3	
20/07/2025	8.003	7.23	812	2	
21/07/2025	7.954	7.24	782	4	
22/07/2025	8.032	7.23	802	3	6
23/07/2025	8.066	7.26	778	4	
24/07/2025	8.037	7.22	796	4	
25/07/2025	5.359	7.23	782	5	
26/07/2025	8.213	7.30	787	4	
27/07/2025	7.978	7.28	789	4	
28/07/2025	8.396	7.33	792	4	
29/07/2025	8.028	7.31	789	4	1
30/07/2025	6.473	7.18	803	3	
31/07/2025	7.998	7.27	752	4	
1/08/2025	7.986	7.23	808	3	
2/08/2025	7.981	7.18	767	3	
3/08/2025	8.358	7.17	792	4	
4/08/2025	8.230	7.22	783	3	1
5/08/2025	8.124	7.24	793	4	
6/08/2025	8.316	7.24	804	2	
7/08/2025	8.001	7.24	787	3	
8/08/2025	8.012	7.21	823	4	
9/08/2025	8.426	7.26	770	4	
10/08/2025	6.282	7.19	783	5	
11/08/2025	4.399	7.23	821	4	
12/08/2025	8.001	7.29	787	4	
13/08/2025	7.956	7.44	802	10	3
14/08/2025	8.029	7.47	803	8	
15/08/2025	8.262	7.46	804	8	
16/08/2025	7.984	7.46	785	8	
17/08/2025	7.984	7.51	791	9	
18/08/2025	8.279	7.49	787	8	
19/08/2025	8.757	7.54	797	9	
20/08/2025	4.267	7.55	796	8	1
21/08/2025	9.274	7.66	780	8	
22/08/2025	8.184	7.61	797	8	
23/08/2025	8.285	7.61	805	9	
24/08/2025	8.275	7.48	795	9	
25/08/2025	8.172	7.48	794	9	
26/08/2025	8.015	7.42	784	9	3
27/08/2025	8.162	7.49	813	9	
28/08/2025	9.357	7.51	815	8	
29/08/2025	6.151	7.50	783	9	
30/08/2025	8.062	7.52	785	8	
31/08/2025	7.984	7.45	804	9	
1/09/2025	4.240	7.38	792	9	
2/09/2025	8.386	7.43	768	9	1

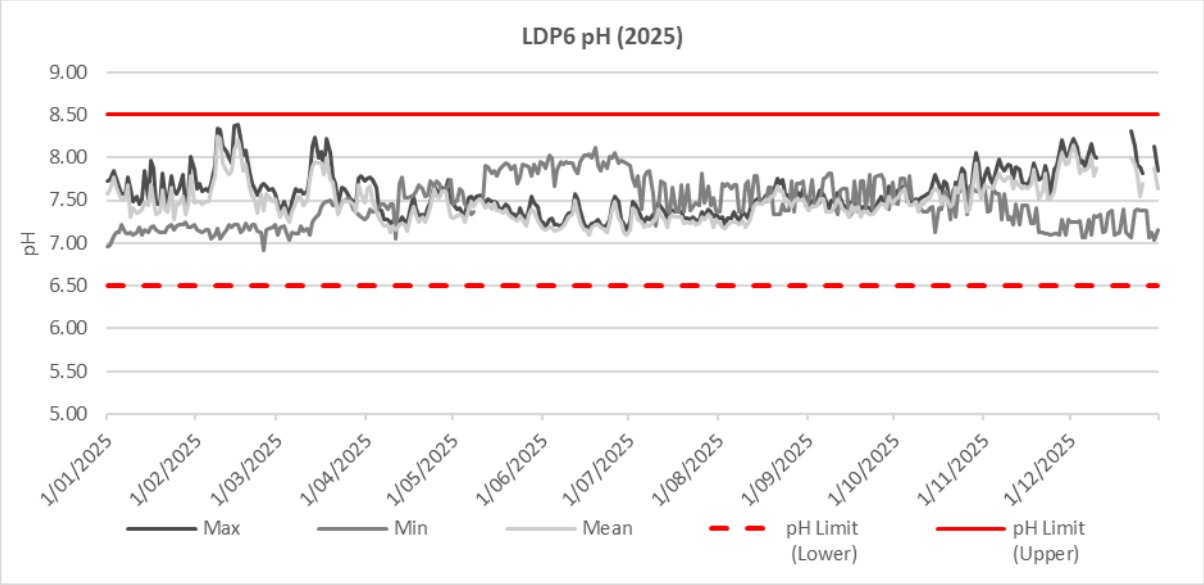
Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
3/09/2025	5.011	7.43	808	8	
4/09/2025	6.260	7.44	749	8	
5/09/2025	6.251	7.51	809	8	
6/09/2025	8.142	7.51	809	9	
7/09/2025	8.049	7.37	803	9	
8/09/2025	6.168	7.36	781	9	
9/09/2025	8.171	7.36	798	9	1
10/09/2025	8.171	7.44	791	9	
11/09/2025	8.994	7.52	772	8	
12/09/2025	8.259	7.47	784	10	
13/09/2025	8.227	7.40	789	7	
14/09/2025	8.000	7.36	791	8	
15/09/2025	8.773	7.30	804	7	
16/09/2025	7.987	7.44	789	9	3
17/09/2025	8.111	7.37	797	6	
18/09/2025	8.011	7.43	798	8	
19/09/2025	8.544	7.31	776	7	
20/09/2025	8.095	7.36	803	10	
21/09/2025	8.037	7.36	783	7	
22/09/2025	8.143	7.34	817	7	
23/09/2025	8.032	7.33	813	6	3
24/09/2025	8.431	7.36	792	7	
25/09/2025	8.172	7.41	755	7	
26/09/2025	4.438	7.45	794	6	
27/09/2025	4.112	7.46	754	7	
28/09/2025	4.161	7.41	767	6	
29/09/2025	5.257	7.55	755	5	
30/09/2025	5.057	7.45	754	3	
1/10/2025	4.020	7.52	783	4	3
2/10/2025	4.429	7.53	796	3	
3/10/2025	7.176	7.58	775	5	
4/10/2025	4.022	7.64	759	5	
5/10/2025	4.008	7.51	767	4	
6/10/2025	5.035	7.44	792	5	
7/10/2025	5.120	7.44	782	5	
8/10/2025	4.036	7.49	777	5	
9/10/2025	4.387	7.37	764	3	2
10/10/2025	6.342	7.45	777	5	
11/10/2025	6.098	7.45	729	5	
12/10/2025	5.381	7.51	777	6	
13/10/2025	5.385	7.53	786	4	
14/10/2025	4.074	7.60	796	4	3
15/10/2025	8.438	7.64	777	4	
16/10/2025	7.014	7.60	763	5	
17/10/2025	7.106	7.46	776	6	
18/10/2025	10.122	7.55	785	4	
19/10/2025	8.559	7.51	794	4	
20/10/2025	6.436	7.42	827	6	6
21/10/2025	8.045	7.46	782	4	
22/10/2025	8.077	7.65	814	3	
23/10/2025	9.024	7.59	786	3	

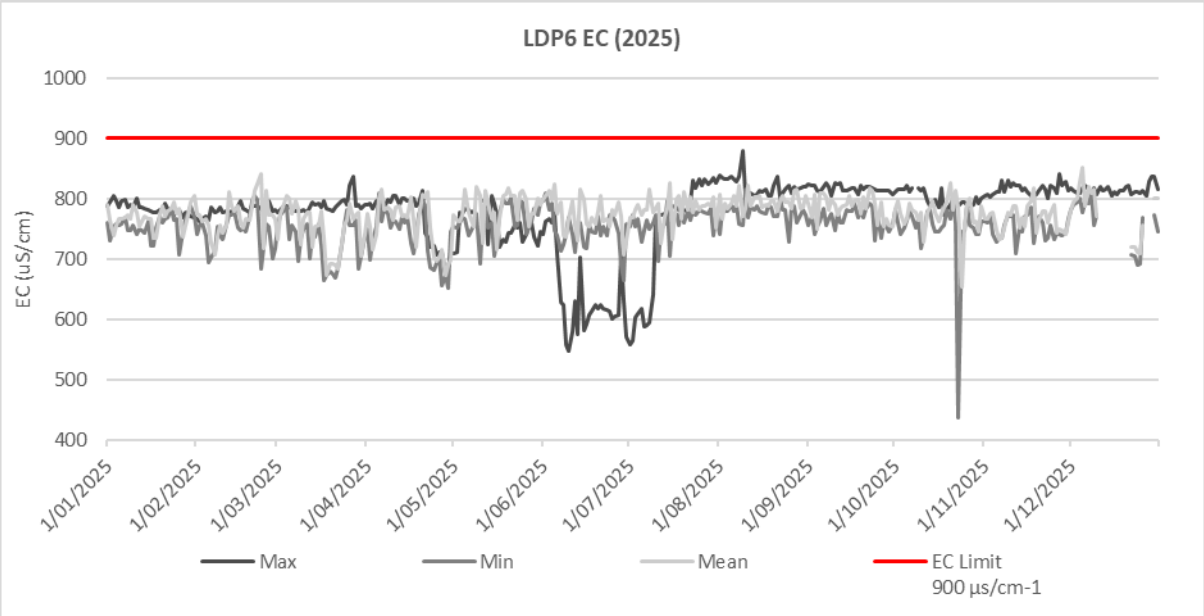
Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
24/10/2025	7.035	7.80	654	5	
25/10/2025	8.287	7.52	755	5	
26/10/2025	7.003	7.37	791	5	
27/10/2025	5.338	7.40	800	4	4
28/10/2025	1.454	7.73	761	4	
29/10/2025	1.151	7.93	763	4	
30/10/2025	6.518	7.63	745	4	
31/10/2025	7.301	7.52	789	4	
1/11/2025	6.648	7.68	766	5	
2/11/2025	7.096	7.65	767	5	
3/11/2025	6.688	7.65	776	6	
4/11/2025	2.174	7.64	778	4	5
5/11/2025	2.030	7.75	747	5	
6/11/2025	1.048	7.82	733	5	
7/11/2025	1.042	7.76	735	5	
8/11/2025	1.012	7.73	752	5	
9/11/2025	1.055	7.77	777	5	
10/11/2025	4.367	7.77	774	6	
11/11/2025	6.776	7.64	789	7	
12/11/2025	4.347	7.72	788	8	
13/11/2025	4.039	7.66	752	6	
14/11/2025	4.305	7.64	769	7	3
15/11/2025	4.174	7.66	754	7	
16/11/2025	4.444	7.64	787	6	
17/11/2025	8.023	7.68	796	7	3
18/11/2025	6.029	7.86	818	6	
19/11/2025	4.121	7.69	743	6	
20/11/2025	4.027	7.52	765	6	
21/11/2025	4.095	7.60	779	6	
22/11/2025	6.184	7.81	780	6	
23/11/2025	5.336	7.52	760	7	
24/11/2025	4.024	7.51	775	7	
25/11/2025	3.099	7.60	791	6	1
26/11/2025	1.042	7.79	743	5	
27/11/2025	1.026	7.94	749	4	
28/11/2025	1.037	8.06	748	4	
29/11/2025	1.279	7.92	742	4	
30/11/2025	1.072	7.93	763	4	
1/12/2025	1.338	8.05	782	4	<1
2/12/2025	1.040	8.14	795	4	
3/12/2025	1.153	7.99	800	5	
4/12/2025	1.043	7.81	828	6	
5/12/2025	0.979	7.87	852	7	
6/12/2025	1.042	7.85	789	5	
7/12/2025	1.053	7.89	820	6	
8/12/2025	1.046	8.01	810	4	2
9/12/2025	0.520	7.79	816	3	
10/12/2025	0.550	7.87	770	7	
11/12/2025	ND				
12/12/2025	ND				
13/12/2025	ND				

Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
14/12/2025	ND				
15/12/2025	ND				
16/12/2025	ND				
17/12/2025	ND				
18/12/2025	ND				
19/12/2025	ND				
20/12/2025	ND				
21/12/2025	ND				
22/12/2025	1.939	8.00	719	4	
23/12/2025	2.107	7.92	719	4	
24/12/2025	1.055	7.78	712	4	
25/12/2025	1.125	7.54	710	3	
26/12/2025	1.066	7.69	755	5	
27/12/2025	ND				
28/12/2025	ND				
29/12/2025	ND				
30/12/2025	5.975	7.87	800	2	
31/12/2025	4.939	7.64	800	4	<1

Notes: ND = No Discharge


LDP6 Discharge ML/Day (2025)
ML/Day
16
14
12
10
8
6
4
2
0
1/01/2025
1/02/2025
1/03/2025
1/04/2025
1/05/2025
1/06/2025
1/07/2025
1/08/2025
1/09/2025
1/10/2025
1/11/2025
1/12/2025
Flow (ML/Day)
EPL Volume Limit (ML/Day)


LDP6 pH (2025)
pH
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
1/01/2025
1/02/2025
1/03/2025
1/04/2025
1/05/2025
1/06/2025
1/07/2025
1/08/2025
1/09/2025
1/10/2025
1/11/2025
1/12/2025
Max
Min
Mean
pH Limit (Lower)
pH Limit (Upper)


LDP6 EC (2025)
EC (uS/cm)
1000
900
800
700
600
500
400
1/01/2025
1/02/2025
1/03/2025
1/04/2025
1/05/2025
1/06/2025
1/07/2025
1/08/2025
1/09/2025
1/10/2025
1/11/2025
1/12/2025
Max
Min
Mean
EC Limit 900 µs/cm-1

3. LDP 19 Daily Average Results

		Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
LDP 19	Minimum	0.0	7.03	708.0	0.0	0.0
	Maximum	18.5	7.52	811.0	6.0	2.0
	Average	10.2	7.25	770.3	1.6	1.1

Table 3-1 LDP19 Daily Average Results 2025

Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
1/01/2025	11.962	7.40	766	2	
2/01/2025	10.197	7.42	777	1	
3/01/2025	12.801	7.43	776	2	
4/01/2025	13.448	7.41	779	1	
5/01/2025	10.326	7.39	780	2	
6/01/2025	7.953	7.36	779	2	
7/01/2025	11.524	7.36	768	2	
8/01/2025	11.075	7.34	779	2	2.00
9/01/2025	7.001	7.36	777	3	
10/01/2025	8.749	7.33	779	1	
11/01/2025	13.196	7.30	779	3	
12/01/2025	15.490	7.30	782	2	
13/01/2025	9.509	7.30	787	3	<1
14/01/2025	12.350	7.32	782	3	
15/01/2025	5.370	7.32	784	2	
16/01/2025	8.715	7.34	750	1	
17/01/2025	9.157	7.35	773	2	
18/01/2025	11.257	7.36	781	2	
19/01/2025	9.838	7.42	776	2	
20/01/2025	10.759	7.37	773	2	<1
21/01/2025	11.838	7.35	784	2	
22/01/2025	11.119	7.34	784	2	
23/01/2025	9.907	7.35	785	2	
24/01/2025	11.207	7.37	784	2	
25/01/2025	11.574	7.36	786	2	
26/01/2025	11.390	7.34	783	2	
27/01/2025	11.310	7.32	782	3	
28/01/2025	9.500	7.31	779	2	<1
29/01/2025	7.497	7.31	762	2	
30/01/2025	8.955	7.31	770	1	
31/01/2025	10.055	7.26	778	3	
1/02/2025	10.944	7.24	783	2	
2/02/2025	8.988	7.23	783	2	
3/02/2025	6.764	7.22	783	2	
4/02/2025	7.190	7.22	774	2	<1
5/02/2025	7.575	7.18	770	1	
6/02/2025	5.211	7.16	771	1	
7/02/2025	7.088	7.13	775	1	
8/02/2025	6.954	7.08	775	1	

Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
9/02/2025	5.028	7.07	778	1	
10/02/2025	5.967	7.13	771	1	<1
11/02/2025	5.974	7.23	775	1	
12/02/2025	7.424	7.20	775	1	
13/02/2025	10.225	7.12	772	1	
14/02/2025	12.553	7.12	771	3	
15/02/2025	15.238	7.11	775	4	
16/02/2025	15.584	7.14	783	4	
17/02/2025	10.994	7.16	783	3	
18/02/2025	11.095	7.15	782	2	<1
19/02/2025	11.594	7.16	779	2	
20/02/2025	10.402	7.17	781	2	
21/02/2025	13.456	7.19	778	2	
22/02/2025	14.189	7.19	782	1	
23/02/2025	14.202	7.17	780	2	
24/02/2025	13.046	7.17	783	2	<1
25/02/2025	12.792	7.20	783	2	
26/02/2025	9.918	7.17	784	1	
27/02/2025	10.662	7.19	777	1	
28/02/2025	15.178	7.17	779	1	
1/03/2025	15.228	7.17	780	1	
2/03/2025	14.564	7.16	784	1	
3/03/2025	10.831	7.17	783	1	0.00
4/03/2025	7.516	7.20	782	1	
5/03/2025	11.898	7.20	768	1	
6/03/2025	13.406	7.19	782	1	
7/03/2025	11.849	7.27	781	1	
8/03/2025	12.828	7.30	774	1	
9/03/2025	11.534	7.31	777	1	
10/03/2025	11.486	7.31	778	1	0.00
11/03/2025	10.781	7.32	779	1	
12/03/2025	12.425	7.34	769	1	
13/03/2025	7.290	7.33	768	1	
14/03/2025	9.471	7.29	764	1	
15/03/2025	8.095	7.23	777	1	
16/03/2025	7.479	7.22	773	1	
17/03/2025	10.932	7.24	772	1	0.00
18/03/2025	6.727	7.23	775	1	
19/03/2025	0.000	7.18	772	0	
20/03/2025	0.000	7.13	775	0	
21/03/2025	5.422	7.19	763	0	
22/03/2025	6.108	7.22	763	1	
23/03/2025	10.355	7.24	786	2	
24/03/2025	11.613	7.24	778	2	0.00
25/03/2025	12.615	7.21	782	1	
26/03/2025	15.205	7.19	778	1	
27/03/2025	12.253	7.20	778	1	
28/03/2025	13.705	7.20	781	1	
29/03/2025	18.411	7.20	779	1	
30/03/2025	16.113	7.19	783	3	
31/03/2025	15.431	7.19	777	3	

Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
1/04/2025	17.346	7.16	779	3	1.00
2/04/2025	12.735	7.13	779	2	
3/04/2025	12.995	7.18	775	2	
4/04/2025	15.989	7.13	778	3	
5/04/2025	10.591	7.14	777	2	
6/04/2025	13.760	7.12	771	2	
7/04/2025	14.313	7.10	778	2	1.00
8/04/2025	12.187	7.11	778	2	
9/04/2025	12.747	7.10	777	2	
10/04/2025	14.441	7.09	777	2	
11/04/2025	13.187	7.06	778	2	
12/04/2025	15.994	7.07	784	2	
13/04/2025	17.152	7.04	790	2	
14/04/2025	10.376	7.06	792	2	1.00
15/04/2025	14.252	7.13	788	3	
16/04/2025	12.314	7.25	790	2	
17/04/2025	15.654	7.22	793	2	
18/04/2025	14.432	7.19	795	3	
19/04/2025	16.550	7.17	795	3	
20/04/2025	12.868	7.21	792	3	
21/04/2025	13.948	7.19	796	2	
22/04/2025	11.042	7.20	795	2	1.00
23/04/2025	11.836	7.25	792	1	
24/04/2025	13.090	7.21	795	2	
25/04/2025	15.816	7.20	794	1	
26/04/2025	16.147	7.17	795	2	
27/04/2025	4.475	7.23	791	2	
28/04/2025	8.521	7.22	789	0	
29/04/2025	12.042	7.19	766	2	
30/04/2025	14.056	7.19	793	2	
1/05/2025	17.174	7.18	792	2	1.00
2/05/2025	15.358	7.18	795	2	
3/05/2025	18.506	7.17	795	2	
4/05/2025	13.828	7.17	796	2	
5/05/2025	7.753	7.22	795	2	1.00
6/05/2025	10.705	7.23	791	2	
7/05/2025	11.717	7.19	794	2	
8/05/2025	13.102	7.18	802	2	
9/05/2025	13.351	7.15	802	2	
10/05/2025	10.903	7.21	795	2	
11/05/2025	9.734	7.17	799	1	
12/05/2025	9.843	7.38	794	1	1.00
13/05/2025	15.968	7.51	790	2	
14/05/2025	13.082	7.52	766	2	
15/05/2025	15.794	7.50	764	2	
16/05/2025	15.402	7.51	765	2	
17/05/2025	15.787	7.49	767	2	
18/05/2025	12.370	7.52	763	1	
19/05/2025	13.234	7.51	767	1	1.00
20/05/2025	16.647	7.47	767	1	
21/05/2025	14.948	7.47	770	1	

Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
22/05/2025	15.338	7.47	767	2	
23/05/2025	11.614	7.48	768	4	
24/05/2025	13.050	7.47	767	1	
25/05/2025	16.072	7.43	769	2	
26/05/2025	13.703	7.43	770	2	
27/05/2025	14.425	7.43	766	3	
28/05/2025	17.253	7.40	767	4	2.00
29/05/2025	14.195	7.40	773	3	
30/05/2025	16.572	7.38	775	3	
31/05/2025	13.369	7.40	780	3	
1/06/2025	15.658	7.40	783	1	
2/06/2025	15.995	7.34	785	2	
3/06/2025	15.170	7.33	785	2	1.00
4/06/2025	13.706	7.30	793	2	
5/06/2025	13.582	7.31	790	1	
6/06/2025	17.778	7.31	770	2	
7/06/2025	14.400	7.33	762	3	
8/06/2025	16.075	7.33	762	2	
9/06/2025	14.703	7.32	760	2	
10/06/2025	15.011	7.32	756	2	2.00
11/06/2025	15.002	7.30	761	2	
12/06/2025	14.473	7.30	764	2	
13/06/2025	14.109	7.29	773	2	
14/06/2025	13.746	7.31	766	3	
15/06/2025	17.201	7.27	756	3	
16/06/2025	14.166	7.29	753	1	
17/06/2025	14.895	7.29	753	3	1.00
18/06/2025	15.348	7.27	756	2	
19/06/2025	16.697	7.26	761	2	
20/06/2025	7.707	7.26	767	3	
21/06/2025	11.543	7.29	758	2	
22/06/2025	12.205	7.26	771	2	
23/06/2025	11.423	7.27	773	2	
24/06/2025	11.346	7.29	771	2	1.00
25/06/2025	10.489	7.30	768	2	
26/06/2025	14.364	7.28	771	2	
27/06/2025	9.653	7.29	773	2	
28/06/2025	15.059	7.29	773	2	
29/06/2025	12.601	7.30	774	2	
30/06/2025	12.758	7.31	773	2	
1/07/2025	16.439	7.29	773	3	2.00
2/07/2025	15.545	7.26	776	3	
3/07/2025	13.943	7.24	771	3	
4/07/2025	14.738	7.21	776	3	
5/07/2025	17.667	7.15	775	3	
6/07/2025	11.384	7.15	776	3	
7/07/2025	16.971	7.16	774	3	
8/07/2025	16.782	7.16	776	3	1.00
9/07/2025	15.137	7.16	802	4	
10/07/2025	12.593	7.16	811	4	
11/07/2025	16.054	7.21	795	3	

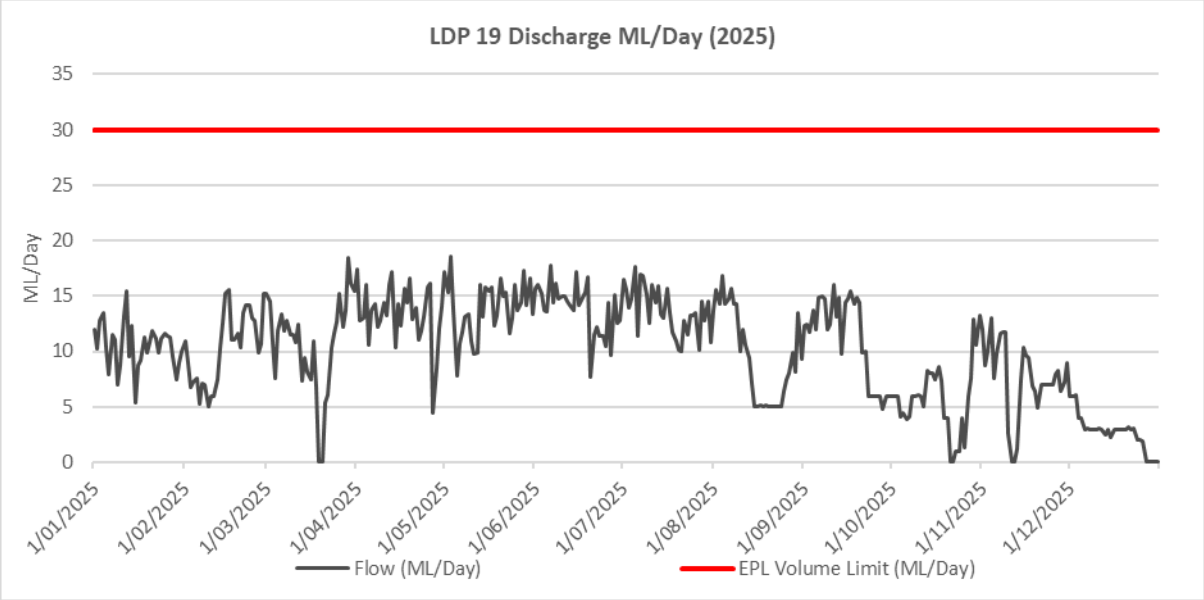
Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
12/07/2025	14.446	7.27	798	3	
13/07/2025	15.931	7.26	792	3	
14/07/2025	13.412	7.26	792	3	
15/07/2025	12.978	7.25	790	4	1.00
16/07/2025	15.659	7.07	804	4	
17/07/2025	13.480	7.03	786	3	
18/07/2025	11.755	7.07	755	1	
19/07/2025	10.951	7.10	753	3	
20/07/2025	10.076	7.10	756	3	
21/07/2025	10.009	7.09	749	2	
22/07/2025	12.744	7.10	752	0	1.00
23/07/2025	11.460	7.09	757	5	
24/07/2025	13.190	7.09	749	3	
25/07/2025	13.295	7.10	763	3	
26/07/2025	13.436	7.08	763	2	
27/07/2025	10.174	7.14	762	0	
28/07/2025	14.499	7.14	758	3	
29/07/2025	12.804	7.11	759	2	1.00
30/07/2025	14.536	7.09	760	2	
31/07/2025	10.799	7.11	762	4	
1/08/2025	13.759	7.15	758	0	
2/08/2025	15.522	7.10	762	2	
3/08/2025	14.337	7.14	761	2	
4/08/2025	16.781	7.14	764	2	1.00
5/08/2025	14.250	7.15	766	2	
6/08/2025	14.795	7.14	764	2	
7/08/2025	15.724	7.16	761	2	
8/08/2025	14.326	7.16	764	2	
9/08/2025	14.274	7.16	772	2	
10/08/2025	9.945	7.15	767	2	
11/08/2025	11.928	7.15	770	0	
12/08/2025	10.527	7.18	772	0	
13/08/2025	9.460	7.08	768	2	2.00
14/08/2025	7.062	7.07	762	2	
15/08/2025	4.989	7.12	760	0	
16/08/2025	5.029	7.12	775	0	
17/08/2025	5.088	7.12	765	0	
18/08/2025	5.021	7.12	748	1	
19/08/2025	5.110	7.14	763	1	
20/08/2025	5.030	7.15	759	0	1.00
21/08/2025	4.982	7.13	770	0	
22/08/2025	4.994	7.12	772	0	
23/08/2025	4.993	7.12	766	1	
24/08/2025	5.008	7.14	768	0	
25/08/2025	6.463	7.14	773	0	
26/08/2025	7.468	7.18	775	0	1.00
27/08/2025	8.004	7.13	772	0	
28/08/2025	9.936	7.16	765	0	
29/08/2025	8.132	7.19	767	1	
30/08/2025	13.504	7.18	767	2	
31/08/2025	9.342	7.18	763	2	

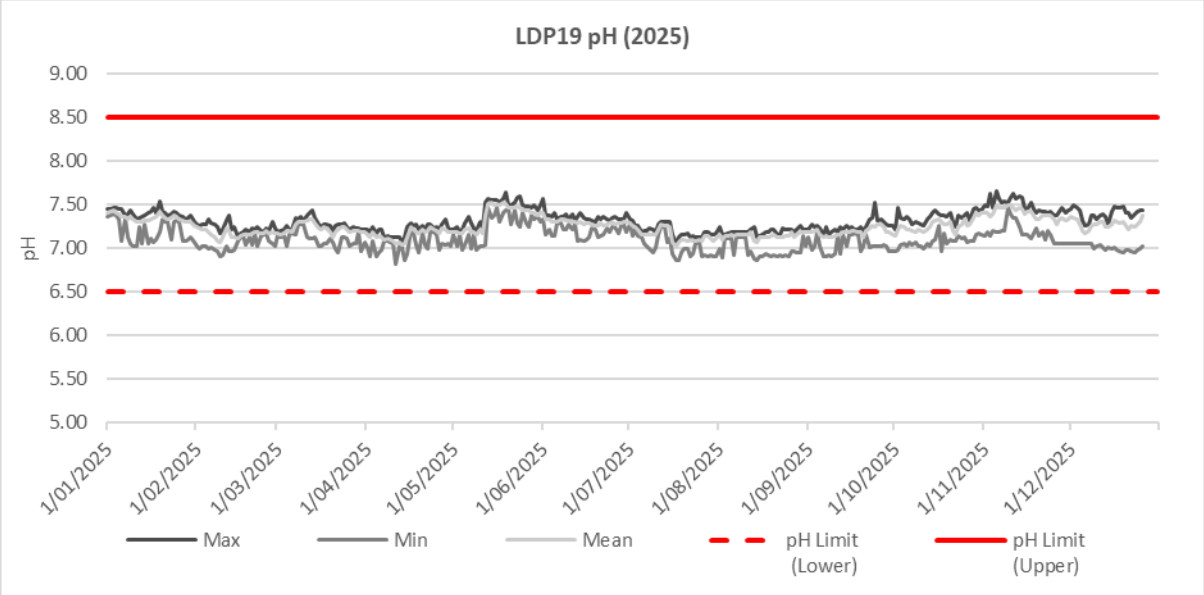
Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
1/09/2025	12.283	7.18	764	1	
2/09/2025	12.482	7.19	762	2	1.00
3/09/2025	11.751	7.20	755	2	
4/09/2025	13.677	7.22	754	2	
5/09/2025	12.003	7.16	752	2	
6/09/2025	14.892	7.13	753	2	
7/09/2025	14.964	7.14	750	2	
8/09/2025	14.712	7.12	745	3	
9/09/2025	11.982	7.13	739	2	1.00
10/09/2025	12.440	7.14	741	0	
11/09/2025	16.072	7.16	738	3	
12/09/2025	13.095	7.16	747	3	
13/09/2025	14.813	7.18	742	2	
14/09/2025	9.723	7.19	742	2	
15/09/2025	14.367	7.19	738	2	
16/09/2025	14.687	7.20	736	2	1.00
17/09/2025	15.428	7.20	734	2	
18/09/2025	14.233	7.19	730	4	
19/09/2025	14.913	7.19	735	3	
20/09/2025	14.418	7.12	734	4	
21/09/2025	9.936	7.20	742	2	
22/09/2025	9.969	7.23	742	0	
23/09/2025	5.957	7.26	736	1	2.00
24/09/2025	5.955	7.25	729	0	
25/09/2025	5.957	7.27	728	0	
26/09/2025	5.946	7.28	728	0	
27/09/2025	5.959	7.25	725	0	
28/09/2025	4.786	7.19	721	0	
29/09/2025	5.962	7.19	723	4	
30/09/2025	5.972	7.16	736	0	1.00
1/10/2025	5.959	7.14	740	1	
2/10/2025	5.949	7.22	755	0	
3/10/2025	5.993	7.26	764	0	
4/10/2025	4.071	7.24	761	0	
5/10/2025	4.448	7.21	750	0	
6/10/2025	3.901	7.22	743	2	
7/10/2025	4.088	7.20	745	3	
8/10/2025	5.978	7.19	749	2	
9/10/2025	5.956	7.22	753	2	1.00
10/10/2025	6.019	7.20	745	3	
11/10/2025	5.913	7.18	758	3	
12/10/2025	5.047	7.22	756	3	
13/10/2025	8.307	7.24	753	0	
14/10/2025	7.999	7.31	758	2	2.00
15/10/2025	8.048	7.32	751	3	
16/10/2025	7.449	7.33	747	2	
17/10/2025	8.560	7.31	770	0	
18/10/2025	7.388	7.27	779	3	
19/10/2025	3.981	7.28	797	0	
20/10/2025	3.996	7.30	791	1	1.00
21/10/2025	0.000	7.20	780	0	

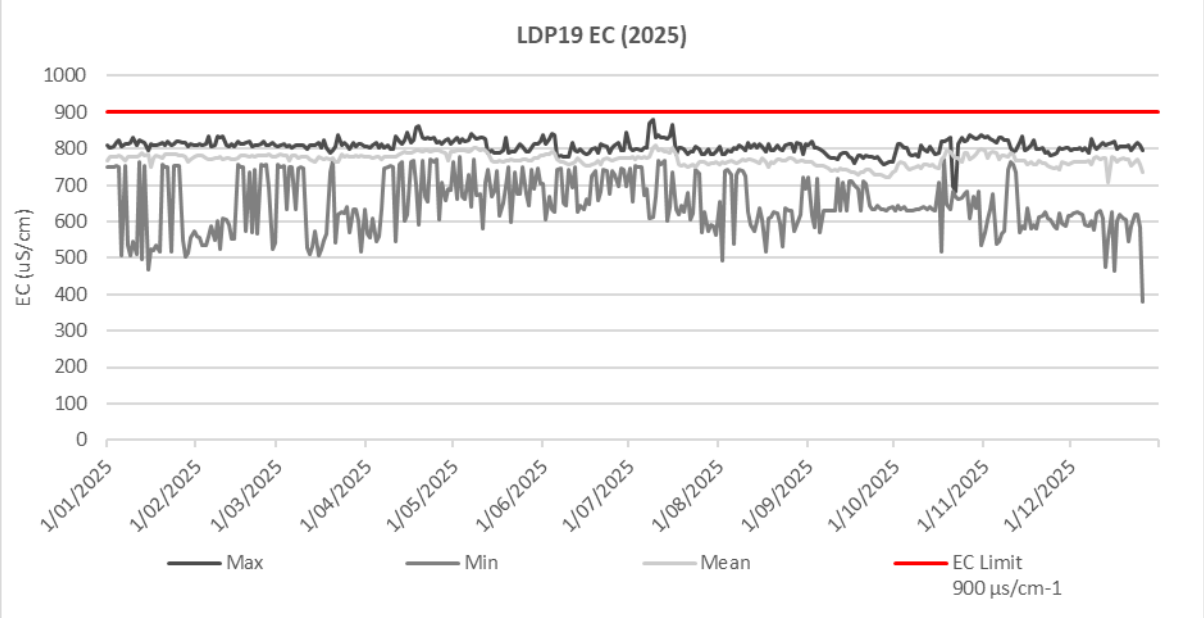
Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
22/10/2025	0.000	7.16	773	0	
23/10/2025	1.024	7.24	774	0	
24/10/2025	1.017	7.28	764	0	
25/10/2025	3.984	7.33	787	1	
26/10/2025	1.321	7.26	787	0	
27/10/2025	5.957	7.28	772	0	1.00
28/10/2025	7.541	7.35	779	0	
29/10/2025	12.880	7.41	786	2	
30/10/2025	10.574	7.38	795	2	
31/10/2025	13.183	7.40	798	2	
1/11/2025	11.998	7.40	795	3	
2/11/2025	8.681	7.40	773	0	
3/11/2025	10.023	7.36	787	3	
4/11/2025	12.983	7.39	791	3	1.00
5/11/2025	7.590	7.49	789	2	
6/11/2025	9.763	7.47	772	2	
7/11/2025	11.663	7.46	783	2	
8/11/2025	11.745	7.47	781	2	
9/11/2025	11.774	7.50	778	3	
10/11/2025	2.608	7.49	788	2	
11/11/2025	0.000	7.46	784	1	
12/11/2025	0.000	7.44	768	1	
13/11/2025	1.201	7.46	768	0	
14/11/2025	7.423	7.45	768	0	<1
15/11/2025	10.351	7.39	768	4	
16/11/2025	9.668	7.42	758	4	
17/11/2025	9.397	7.42	763	6	1.00
18/11/2025	6.915	7.37	757	3	
19/11/2025	6.459	7.34	756	3	
20/11/2025	4.951	7.34	767	0	
21/11/2025	7.012	7.37	760	0	
22/11/2025	7.032	7.37	760	0	
23/11/2025	6.992	7.37	754	0	
24/11/2025	6.999	7.37	748	0	
25/11/2025	7.036	7.33	746	0	<1
26/11/2025	7.944	7.28	748	0	
27/11/2025	8.227	7.33	742	0	
28/11/2025	6.465	7.35	765	0	
29/11/2025	7.281	7.32	760	0	
30/11/2025	8.936	7.34	758	0	
1/12/2025	5.960	7.36	760	0	1.00
2/12/2025	6.005	7.35	762	0	
3/12/2025	6.049	7.33	763	0	
4/12/2025	4.029	7.27	765	0	
5/12/2025	4.044	7.20	763	0	
6/12/2025	2.988	7.17	765	0	
7/12/2025	3.023	7.20	766	0	
8/12/2025	2.995	7.26	758	0	<1
9/12/2025	2.992	7.28	774	0	
10/12/2025	2.995	7.27	776	0	
11/12/2025	3.007	7.31	772	0	

Date	Flow (ML/Day)	pH	EC (µs/cm-1)	Turbidity (NTU)	TSS (mg/L)
12/12/2025	2.988	7.31	773	0	
13/12/2025	2.490	7.25	773	0	
14/12/2025	2.991	7.24	708	0	
15/12/2025	2.204	7.28	776	0	
16/12/2025	2.978	7.32	773	0	2.00
17/12/2025	2.996	7.31	762	0	
18/12/2025	2.965	7.29	771	0	
19/12/2025	2.987	7.30	774	0	
20/12/2025	2.982	7.26	770	0	
21/12/2025	3.157	7.22	769	0	
22/12/2025	2.983	7.26	752	0	<1
23/12/2025	3.008	7.25	764	0	
24/12/2025	1.975	7.27	770	0	
25/12/2025	1.995	7.30	756	0	
26/12/2025	1.911	7.37	734	0	
27/12/2025	ND				
28/12/2025	ND				
29/12/2025	ND				
30/12/2025	ND				
31/12/2025	ND				

Notes: ND = No Discharge


LDP 19 Discharge ML/Day (2025)
ML/Day
35
30
25
20
15
10
5
0
1/01/2025
1/02/2025
1/03/2025
1/04/2025
1/05/2025
1/06/2025
1/07/2025
1/08/2025
1/09/2025
1/10/2025
1/11/2025
1/12/2025
Flow (ML/Day)
EPL Volume Limit (ML/Day)


LDP19 pH (2025)
pH
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
1/01/2025
1/02/2025
1/03/2025
1/04/2025
1/05/2025
1/06/2025
1/07/2025
1/08/2025
1/09/2025
1/10/2025
1/11/2025
1/12/2025
Max
Min
Mean
pH Limit (Lower)
pH Limit (Upper)


LDP19 EC (2025)
EC (uS/cm)
1000
900
800
700
600
500
400
300
200
100
0
1/01/2025
1/02/2025
1/03/2025
1/04/2025
1/05/2025
1/06/2025
1/07/2025
1/08/2025
1/09/2025
1/10/2025
1/11/2025
1/12/2025
Max
Min
Mean
EC Limit 900 µs/cm-1

4. Surface Water Monitoring Result Comparison to Trigger Values

Table 4-1- Adopted Trigger Values for Key Water Quality Parameters

Water Quality Variable	pH	EC (µS/cm)	TSS (mg/L)
Goulburn River Downstream (SW02)[2]	6.5 – 8.5[3]	900[3]	13[1]
Ulan Creek Upstream of LDP6 (SW03)	6.5 – 8.1[7]	1440[7]	18[7]
Ulan Creek at Old Ulan (SW04)	6.5 – 8.5[6]	900[6]	47[7]
Ulan Creek at Pleuger Road (SW05)	6.5 – 8.5[6]	900[6]	18[7]
Spring Gully (SW06)	6.5 – 7.6[7]	417[7]	102[7]
Bobadeen Creek (SW07)	6.8 – 7.4[7]	205[7]	150[7]
Curra Creek (SW08)	6.5 – 8.0[4]	30 – 350[4]	50[5]
Mona Creek (SW10)	6.5 – 7.4[7]	214[7]	92[7]
Cockabutta Creek (SW11)	6.5 – 8.0[4]	30 – 350[4]	50[5]
Clean Water Diversion/System (SW12, SW13 (EPL 23), SW14, SW15)	6.5 – 8.5[6]	900[6]	50[5]

Notes: [1] 80th percentile based on historical data for the Goulburn River. [2] SW02 is downstream of the Ulan Mine Complex and as such water quality at this location can be influenced by other developments in the catchment outside of UCMPL influence, such as neighbouring mines discharge downstream of SW01. [3] Trigger based on EPL394 limits for discharge points LDP6 and LDP19 which are upstream of this monitoring site. [4] Interim trigger values based on ANZECC (2000) default trigger values for lowland rivers in NSW. Site-specific trigger values will be developed as monitoring data becomes available. [5] Interim trigger values based on Volume 1 of Managing Urban Stormwater: Soils and Construction (Landcom, 2004). [6] Trigger level reflects upstream discharge limit approved under EPL394. [7] 80th percentile of baseline data- upper limit trigger value. Lower value trigger for pH based on ANZECC (2000) default trigger values for lowland rivers in NSW.

Table 4-2- 2025 Monthly Sampling Result Summary

SW Sites	pH			EC (µS/cm)			TSS (mg/L)		
	Min	Max	Ave	Min	Max	Ave	Min	Max	Ave
SW01	6.9	7.2	7.1	340	753	472	8	71	22
SW02	7.6	8.2	8.1	496	786	657	2	47	8
SW03	8.2	8.5	8.3	893	1270	1153	13	17	15
SW04	8.0	8.6	8.4	729	798	771	1	111	15
SW05	7.3	8.0	7.6	720	817	778	1	6	3
SW06	*	*	*	*	*	*	*	*	*
SW07	*	*	*	*	*	*	*	*	*
SW08	*	*	*	*	*	*	*	*	*
SW09	8.0	8.6	8.4	264	1070	759	29	182	67
SW10	*	*	*	*	*	*	*	*	*
SW11	*	*	*	*	*	*	*	*	*
SW12^	7.7	7.7	7.7	282	282	282	38	38	38
SW13	*	*	*	*	*	*	*	*	*
SW14	*	*	*	*	*	*	*	*	*
SW15	*	*	*	*	*	*	*	*	*

Notes: Shaded results indicate a trigger has occurred i.e. three or more consecutive monthly results are outside of respective water quality criteria. * No flows in creeks or drainage systems at the time of monthly surface water sampling in 2025. ^ Only one monthly sample available for analysis

5. Goulburn River Monitoring

5.1 SW01 Upstream Goulburn River

SW01 is located in the Goulburn River upstream of operations, near the confluence of Moolarben Creek and Sportsman Hollow Creek. SW01 is sampled monthly, after specific rainfall events and is equipped with sensors recording daily average EC, pH and flow volumes. SW01 is located at an existing level concrete causeway crossing across the Goulburn River, at the end of Short Street in the Ulan Village. SW01 is considered outside the influence of UCMPL mining activities. The 2025 water quality monitoring and flow results from SW01 indicate that:

- Continuous daily water monitoring indicates that pH ranged between pH 5.29 – pH 7.35for 2025.
- Continuous water monitoring indicates that EC concentrations ranged between 219 µS/cm – 809 µS/cm for 2025:
    - The maximum daily EC result of 809 µS/cm occurred on 31 December 2025.
    - The daily average EC was 480.85 µS/cm for 2025.
- Monthly grab sample monitoring results for pH ranged between pH 6.9 – pH 7.2 for 2025.
- Monthly grab sample monitoring results for EC ranged between 340 µS/cm – 753 µS/cm for 2025.
- Monthly grab sample monitoring results for TSS ranged between 8 mg/L – 71mg/L for 2025.

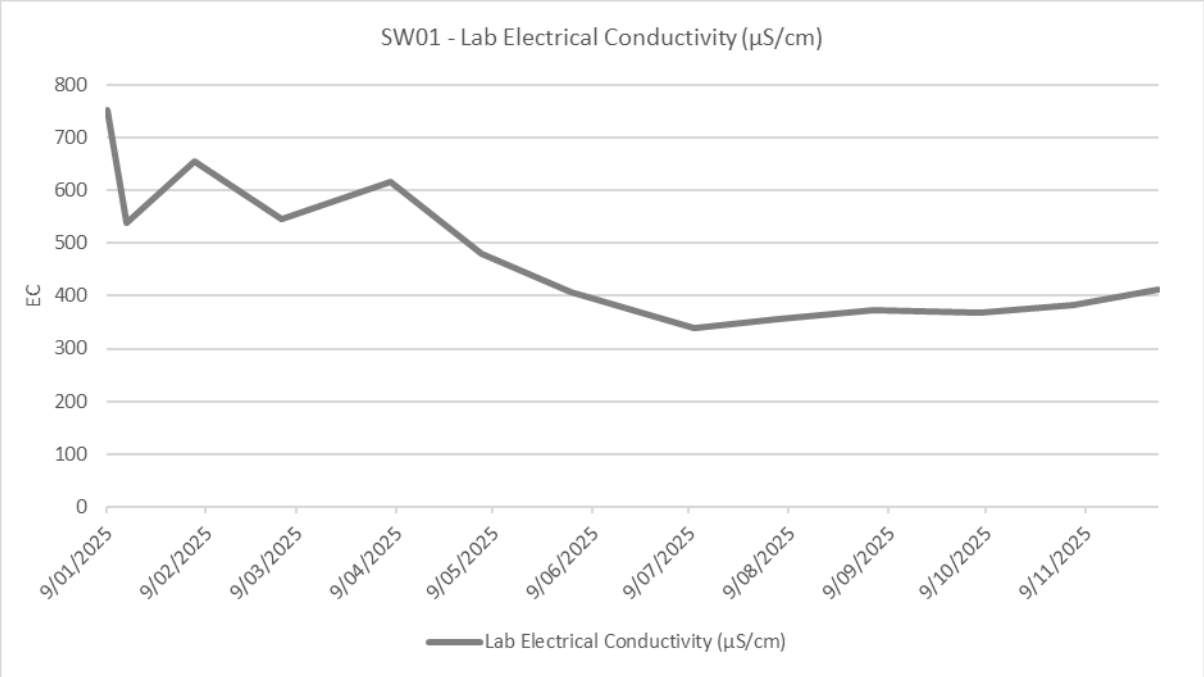


Figure 5-1 SW01 Upstream Goulburn River Monthly Grab Sample EC Results 2025

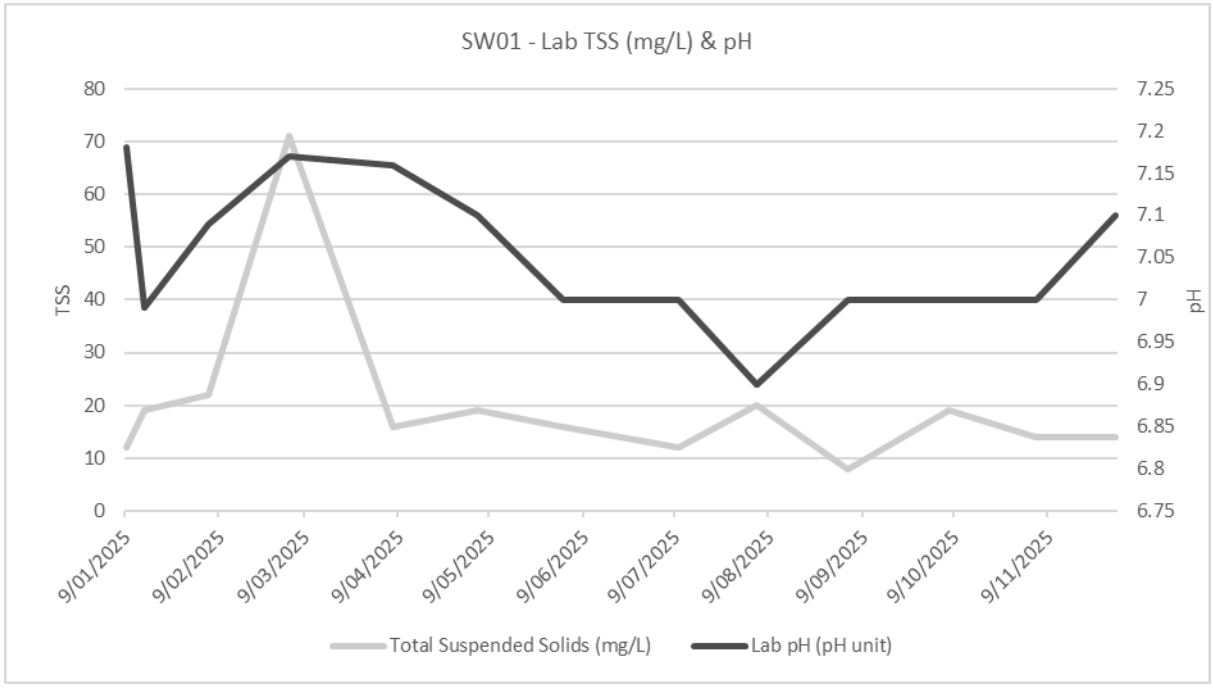


Figure 5-2 SW01 Upstream Goulburn River Monthly Grab Sample pH & TSS Results 2025

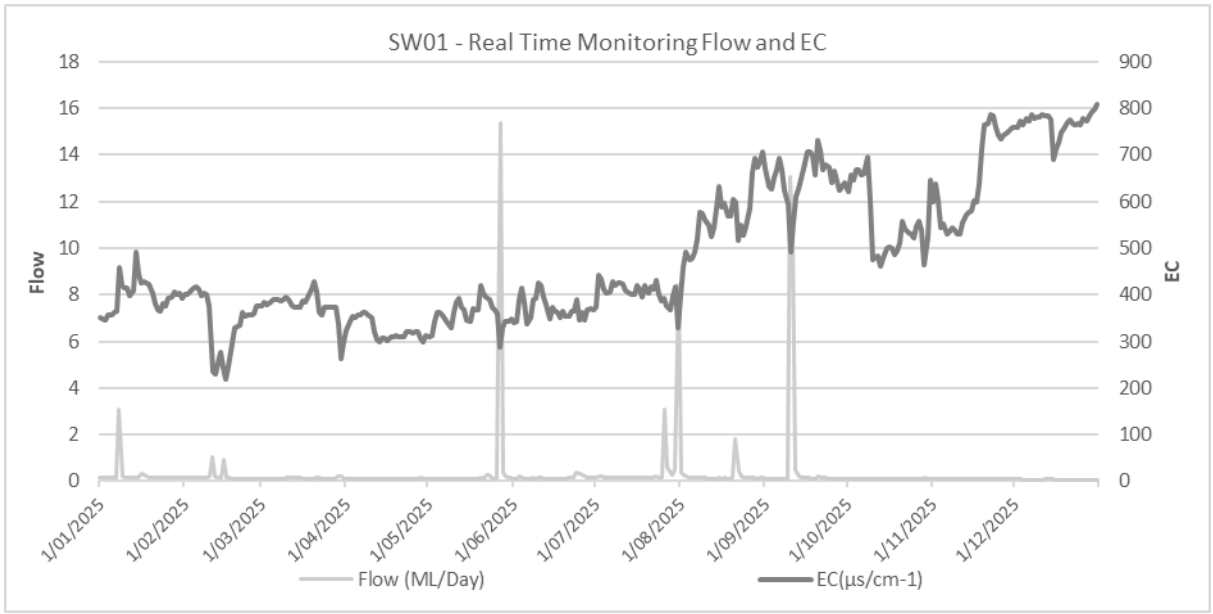


Figure 5-3 SW01 Upstream Goulburn River Real Time Flow & EC Results 2025

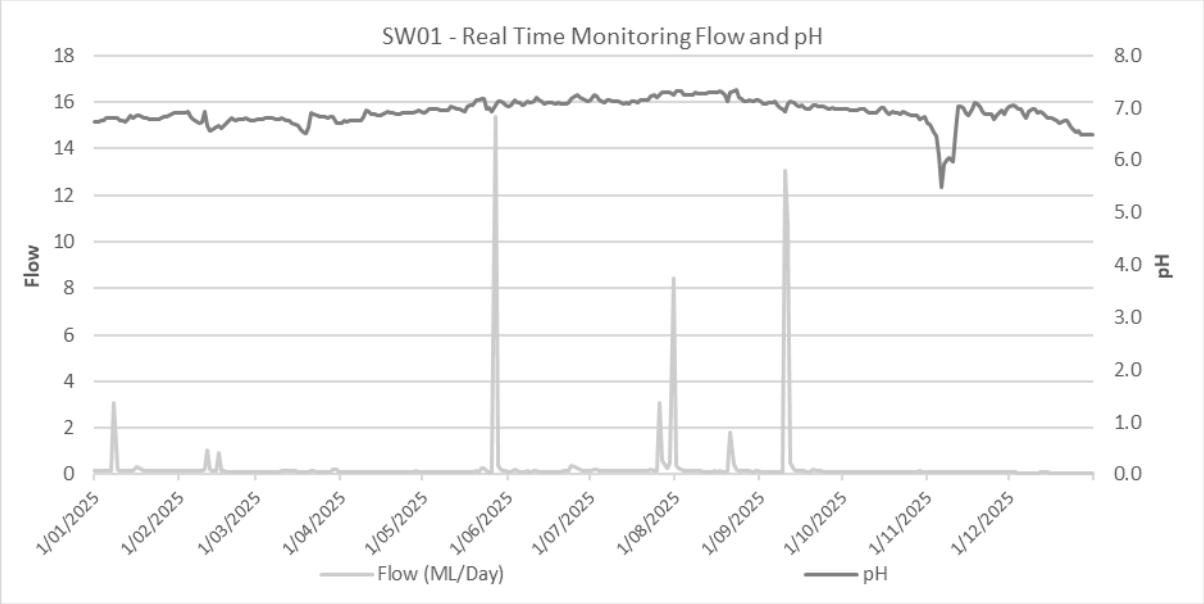


Figure 5-4 SW01 Upstream Goulburn River Real Time Flow & pH Results 2025

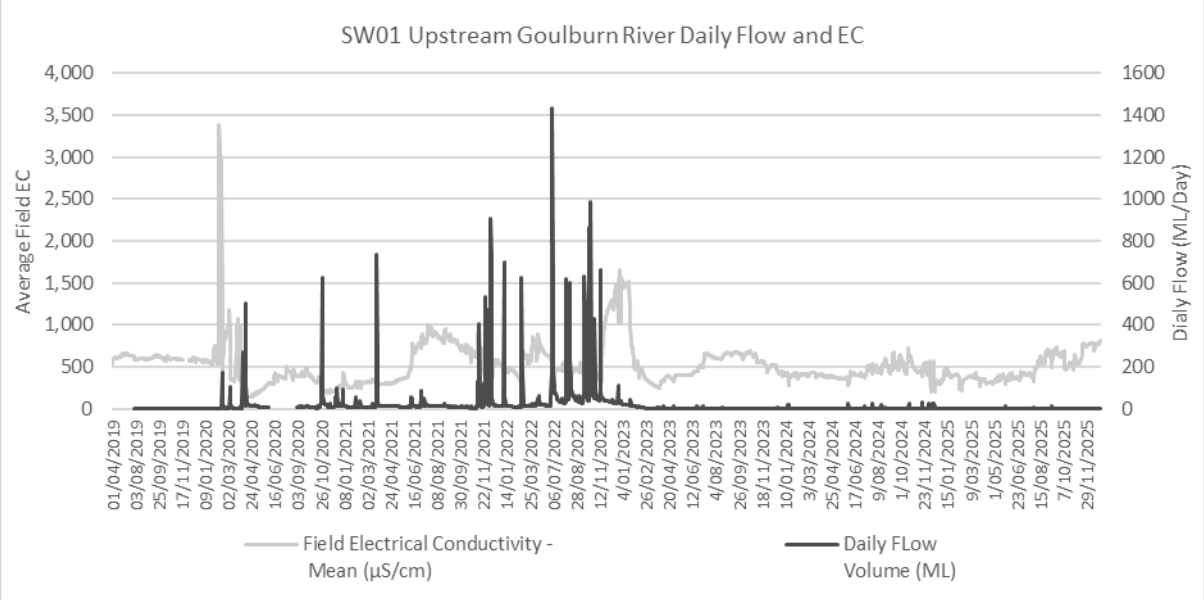


Figure 5-5 SW01 Upstream Goulburn River Historical Real Time Flow & EC (2019 - 2025)

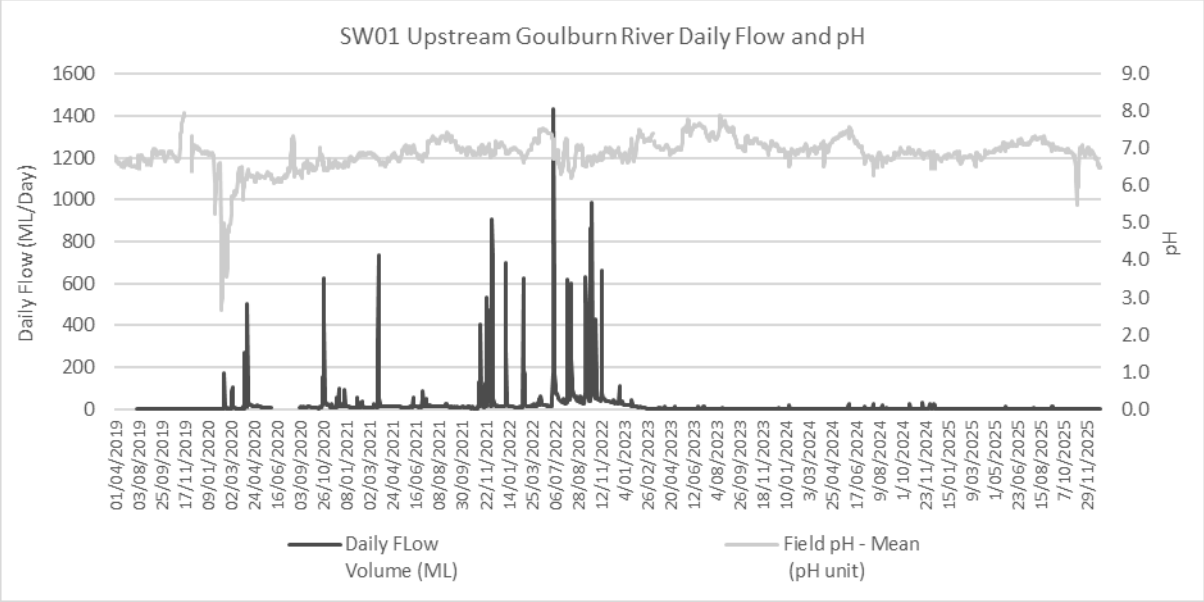


Figure 5-6 SW01 Upstream Goulburn River Real Time Historical Flow & pH (2019 - 2025)

5.1.1 SW01 Daily Average Results

	EC(µs/cm^{-1})	pH	Flow (ML/Day)
Min	219	5.49	0.07
Max	809	7.35	15.38
Average	480.85	6.93	0.29

Table 5-1 SW01 Daily Average Results

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
1/01/2025	350	6.74	0.160
2/01/2025	348	6.74	0.156
3/01/2025	345	6.76	0.155
4/01/2025	358	6.77	0.159
5/01/2025	356	6.80	0.165
6/01/2025	361	6.80	0.155
7/01/2025	364	6.80	0.179
8/01/2025	460	6.82	3.072
9/01/2025	419	6.82	0.231
10/01/2025	416	6.77	0.180
11/01/2025	414	6.76	0.169
12/01/2025	397	6.74	0.160
13/01/2025	409	6.79	0.187
14/01/2025	492	6.87	0.190
15/01/2025	444	6.81	0.170
16/01/2025	427	6.86	0.337
17/01/2025	428	6.87	0.283
18/01/2025	427	6.84	0.209
19/01/2025	424	6.80	0.177
20/01/2025	403	6.80	0.160
21/01/2025	382	6.78	0.157
22/01/2025	368	6.79	0.154
23/01/2025	364	6.78	0.154
24/01/2025	382	6.78	0.150
25/01/2025	377	6.81	0.150
26/01/2025	394	6.83	0.150
27/01/2025	396	6.84	0.152
28/01/2025	407	6.85	0.149
29/01/2025	401	6.89	0.161
30/01/2025	405	6.91	0.175
31/01/2025	393	6.90	0.160
1/02/2025	400	6.90	0.157
2/02/2025	402	6.91	0.158
3/02/2025	408	6.91	0.155
4/02/2025	414	6.92	0.153
5/02/2025	417	6.83	0.148

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
6/02/2025	412	6.79	0.150
7/02/2025	398	6.73	0.146
8/02/2025	403	6.70	0.141
9/02/2025	402	6.73	0.144
10/02/2025	376	6.94	0.245
11/02/2025	235	6.67	1.060
12/02/2025	231	6.57	0.206
13/02/2025	255	6.58	0.167
14/02/2025	278	6.65	0.160
15/02/2025	244	6.67	0.938
16/02/2025	219	6.61	0.179
17/02/2025	246	6.66	0.142
18/02/2025	295	6.71	0.135
19/02/2025	330	6.77	0.133
20/02/2025	333	6.80	0.132
21/02/2025	336	6.75	0.126
22/02/2025	362	6.79	0.125
23/02/2025	354	6.79	0.125
24/02/2025	358	6.79	0.125
25/02/2025	357	6.80	0.122
26/02/2025	360	6.78	0.121
27/02/2025	376	6.76	0.118
28/02/2025	377	6.77	0.119
1/03/2025	375	6.78	0.120
2/03/2025	385	6.78	0.118
3/03/2025	379	6.79	0.116
4/03/2025	384	6.81	0.116
5/03/2025	390	6.81	0.121
6/03/2025	390	6.81	0.127
7/03/2025	390	6.81	0.129
8/03/2025	386	6.79	0.129
9/03/2025	391	6.79	0.130
10/03/2025	396	6.80	0.136
11/03/2025	389	6.78	0.140
12/03/2025	375	6.77	0.143
13/03/2025	374	6.75	0.142
14/03/2025	372	6.71	0.139
15/03/2025	373	6.69	0.136
16/03/2025	386	6.66	0.132
17/03/2025	384	6.59	0.129
18/03/2025	395	6.55	0.131
19/03/2025	412	6.52	0.134
20/03/2025	429	6.63	0.123
21/03/2025	406	6.91	0.143
22/03/2025	361	6.88	0.141
23/03/2025	358	6.86	0.124

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
24/03/2025	373	6.84	0.121
25/03/2025	374	6.84	0.121
26/03/2025	373	6.84	0.120
27/03/2025	372	6.82	0.120
28/03/2025	374	6.83	0.122
29/03/2025	337	6.84	0.215
30/03/2025	263	6.72	0.194
31/03/2025	300	6.70	0.132
1/04/2025	325	6.72	0.121
2/04/2025	343	6.75	0.119
3/04/2025	354	6.74	0.117
4/04/2025	350	6.77	0.116
5/04/2025	356	6.76	0.114
6/04/2025	357	6.77	0.112
7/04/2025	362	6.77	0.111
8/04/2025	362	6.77	0.111
9/04/2025	358	6.84	0.110
10/04/2025	352	6.95	0.106
11/04/2025	321	6.93	0.104
12/04/2025	304	6.89	0.102
13/04/2025	300	6.89	0.100
14/04/2025	307	6.87	0.099
15/04/2025	306	6.86	0.100
16/04/2025	303	6.88	0.100
17/04/2025	311	6.91	0.099
18/04/2025	310	6.92	0.099
19/04/2025	312	6.91	0.102
20/04/2025	310	6.90	0.108
21/04/2025	309	6.88	0.105
22/04/2025	311	6.88	0.104
23/04/2025	320	6.91	0.104
24/04/2025	322	6.91	0.108
25/04/2025	319	6.91	0.110
26/04/2025	321	6.91	0.112
27/04/2025	321	6.91	0.114
28/04/2025	306	6.92	0.143
29/04/2025	300	6.95	0.132
30/04/2025	312	6.94	0.118
1/05/2025	310	6.91	0.113
2/05/2025	312	6.94	0.113
3/05/2025	343	6.99	0.118
4/05/2025	362	6.99	0.112
5/05/2025	362	6.99	0.111
6/05/2025	356	6.99	0.113
7/05/2025	349	6.96	0.108
8/05/2025	339	6.96	0.108

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
9/05/2025	330	6.95	0.104
10/05/2025	362	6.96	0.108
11/05/2025	385	7.02	0.118
12/05/2025	393	7.01	0.116
13/05/2025	372	6.99	0.113
14/05/2025	367	6.97	0.114
15/05/2025	346	6.96	0.111
16/05/2025	342	6.94	0.115
17/05/2025	371	7.03	0.127
18/05/2025	368	7.06	0.115
19/05/2025	367	7.05	0.122
20/05/2025	419	7.15	0.138
21/05/2025	403	7.15	0.130
22/05/2025	396	7.17	0.281
23/05/2025	390	7.17	0.261
24/05/2025	374	6.99	0.141
25/05/2025	369	7.01	0.118
26/05/2025	359	6.93	0.131
27/05/2025	288	7.06	15.379
28/05/2025	330	7.12	0.383
29/05/2025	344	7.13	0.206
30/05/2025	344	7.10	0.162
31/05/2025	348	7.05	0.141
1/06/2025	340	7.02	0.131
2/06/2025	344	7.05	0.125
3/06/2025	390	7.15	0.199
4/06/2025	415	7.11	0.164
5/06/2025	383	7.11	0.132
6/06/2025	337	7.06	0.117
7/06/2025	351	7.08	0.125
8/06/2025	391	7.14	0.137
9/06/2025	394	7.11	0.128
10/06/2025	425	7.14	0.149
11/06/2025	421	7.19	0.152
12/06/2025	396	7.15	0.126
13/06/2025	378	7.12	0.127
14/06/2025	348	7.08	0.118
15/06/2025	372	7.10	0.132
16/06/2025	365	7.11	0.127
17/06/2025	363	7.10	0.129
18/06/2025	350	7.08	0.129
19/06/2025	366	7.10	0.133
20/06/2025	353	7.08	0.130
21/06/2025	355	7.07	0.137
22/06/2025	365	7.09	0.142
23/06/2025	366	7.10	0.149

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
24/06/2025	390	7.17	0.368
25/06/2025	347	7.23	0.313
26/06/2025	362	7.25	0.257
27/06/2025	346	7.19	0.199
28/06/2025	368	7.18	0.179
29/06/2025	370	7.15	0.166
30/06/2025	369	7.13	0.159
1/07/2025	374	7.16	0.175
2/07/2025	442	7.26	0.230
3/07/2025	433	7.22	0.191
4/07/2025	412	7.16	0.169
5/07/2025	405	7.14	0.158
6/07/2025	406	7.11	0.164
7/07/2025	428	7.15	0.178
8/07/2025	419	7.15	0.173
9/07/2025	427	7.13	0.162
10/07/2025	425	7.13	0.161
11/07/2025	424	7.14	0.160
12/07/2025	409	7.10	0.149
13/07/2025	404	7.09	0.148
14/07/2025	401	7.11	0.155
15/07/2025	402	7.09	0.157
16/07/2025	419	7.12	0.160
17/07/2025	411	7.13	0.148
18/07/2025	395	7.10	0.147
19/07/2025	421	7.16	0.154
20/07/2025	403	7.15	0.136
21/07/2025	417	7.15	0.140
22/07/2025	413	7.16	0.149
23/07/2025	431	7.22	0.229
24/07/2025	401	7.24	0.187
25/07/2025	387	7.21	0.154
26/07/2025	393	7.25	3.066
27/07/2025	377	7.30	0.620
28/07/2025	367	7.30	0.445
29/07/2025	399	7.30	0.259
30/07/2025	417	7.30	0.516
31/07/2025	328	7.26	8.409
1/08/2025	398	7.32	0.392
2/08/2025	458	7.33	0.264
3/08/2025	491	7.33	0.231
4/08/2025	474	7.26	0.174
5/08/2025	479	7.26	0.166
6/08/2025	492	7.24	0.154
7/08/2025	520	7.25	0.152
8/08/2025	576	7.29	0.157

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
9/08/2025	575	7.27	0.146
10/08/2025	562	7.28	0.141
11/08/2025	551	7.28	0.134
12/08/2025	524	7.28	0.126
13/08/2025	545	7.31	0.127
14/08/2025	585	7.30	0.128
15/08/2025	633	7.31	0.146
16/08/2025	588	7.29	0.133
17/08/2025	597	7.32	0.137
18/08/2025	569	7.29	0.127
19/08/2025	570	7.24	0.127
20/08/2025	605	7.14	0.147
21/08/2025	598	7.30	1.830
22/08/2025	518	7.33	0.442
23/08/2025	549	7.35	0.233
24/08/2025	528	7.20	0.158
25/08/2025	548	7.17	0.147
26/08/2025	585	7.13	0.143
27/08/2025	663	7.13	0.158
28/08/2025	694	7.15	0.146
29/08/2025	674	7.12	0.134
30/08/2025	687	7.16	0.142
31/08/2025	706	7.16	0.138
1/09/2025	672	7.12	0.125
2/09/2025	633	7.09	0.120
3/09/2025	626	7.09	0.119
4/09/2025	651	7.11	0.123
5/09/2025	667	7.10	0.123
6/09/2025	692	7.12	0.127
7/09/2025	667	7.06	0.122
8/09/2025	623	7.00	0.119
9/09/2025	593	6.97	0.131
10/09/2025	491	6.94	13.073
11/09/2025	554	7.07	10.743
12/09/2025	611	7.13	0.474
13/09/2025	628	7.10	0.231
14/09/2025	648	7.05	0.186
15/09/2025	672	7.04	0.167
16/09/2025	706	7.06	0.155
17/09/2025	708	7.01	0.146
18/09/2025	699	6.98	0.131
19/09/2025	657	6.97	0.132
20/09/2025	733	7.05	0.229
21/09/2025	709	7.05	0.180
22/09/2025	669	7.02	0.153
23/09/2025	679	7.04	0.145

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
24/09/2025	673	7.02	0.134
25/09/2025	641	7.01	0.134
26/09/2025	665	6.98	0.130
27/09/2025	644	7.00	0.128
28/09/2025	624	6.98	0.126
29/09/2025	632	6.99	0.125
30/09/2025	641	6.98	0.125
1/10/2025	621	6.99	0.123
2/10/2025	656	6.98	0.120
3/10/2025	647	6.99	0.119
4/10/2025	669	6.96	0.118
5/10/2025	667	6.96	0.116
6/10/2025	657	6.96	0.115
7/10/2025	660	6.98	0.117
8/10/2025	695	6.97	0.116
9/10/2025	602	6.97	0.119
10/10/2025	474	6.92	0.124
11/10/2025	480	6.90	0.107
12/10/2025	484	6.91	0.104
13/10/2025	462	6.91	0.106
14/10/2025	477	6.96	0.103
15/10/2025	500	7.00	0.099
16/10/2025	502	7.00	0.099
17/10/2025	501	6.92	0.100
18/10/2025	487	6.88	0.101
19/10/2025	494	6.93	0.097
20/10/2025	511	6.91	0.090
21/10/2025	558	6.91	0.096
22/10/2025	541	6.89	0.096
23/10/2025	534	6.94	0.096
24/10/2025	531	6.91	0.095
25/10/2025	522	6.89	0.096
26/10/2025	548	6.86	0.098
27/10/2025	558	6.86	0.100
28/10/2025	539	6.85	0.110
29/10/2025	464	6.78	0.138
30/10/2025	526	6.81	0.125
31/10/2025	645	6.84	0.117
1/11/2025	598	6.71	0.111
2/11/2025	639	6.69	0.112
3/11/2025	602	6.53	0.105
4/11/2025	544	6.46	0.104
5/11/2025	553	6.09	0.100
6/11/2025	530	5.49	0.097
7/11/2025	536	5.92	0.096
8/11/2025	543	5.99	0.100

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
9/11/2025	540	6.05	0.094
10/11/2025	531	5.98	0.092
11/11/2025	530	6.53	0.089
12/11/2025	554	7.03	0.086
13/11/2025	571	7.04	0.086
14/11/2025	576	7.00	0.087
15/11/2025	579	6.90	0.087
16/11/2025	601	6.86	0.091
17/11/2025	598	6.97	0.089
18/11/2025	639	7.11	0.095
19/11/2025	713	7.08	0.094
20/11/2025	764	7.02	0.095
21/11/2025	767	6.93	0.094
22/11/2025	786	6.88	0.099
23/11/2025	784	6.89	0.098
24/11/2025	758	6.89	0.095
25/11/2025	742	6.79	0.095
26/11/2025	735	6.87	0.099
27/11/2025	742	6.90	0.099
28/11/2025	748	6.96	0.090
29/11/2025	753	6.88	0.085
30/11/2025	758	6.99	0.083
1/12/2025	760	7.03	0.085
2/12/2025	760	7.05	0.085
3/12/2025	772	7.03	0.081
4/12/2025	766	6.97	0.079
5/12/2025	778	6.97	0.077
6/12/2025	772	6.89	0.073
7/12/2025	786	6.81	0.079
8/12/2025	778	6.94	0.079
9/12/2025	780	6.98	0.080
10/12/2025	782	6.97	0.076
11/12/2025	788	6.91	0.077
12/12/2025	784	6.94	0.090
13/12/2025	783	6.91	0.084
14/12/2025	777	6.86	0.087
15/12/2025	690	6.82	0.081
16/12/2025	712	6.81	0.077
17/12/2025	725	6.78	0.077
18/12/2025	747	6.77	0.076
19/12/2025	756	6.72	0.072
20/12/2025	771	6.74	0.074
21/12/2025	777	6.75	0.071
22/12/2025	768	6.77	0.072
23/12/2025	765	6.63	0.070
24/12/2025	768	6.59	0.069

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
25/12/2025	766	6.54	0.069
26/12/2025	779	6.57	0.069
27/12/2025	773	6.49	0.071
28/12/2025	783	6.49	0.070
29/12/2025	791	6.48	0.068
30/12/2025	799	6.50	0.068
31/12/2025	809	6.50	0.069

5.2 SW02 Goulburn River Downstream

SW02 is located in the Goulburn River downstream of UCMPL's and MCO activities and other non-UCMPL mining activities. SW02 is sampled monthly, after specific rainfall events and is equipped with sensors recording daily average EC, pH and flow volumes. The 2025 water quality monitoring and flow results from SW02 indicate that:

- Continuous daily water monitoring indicates that pH remained within the adopted criteria of pH 6.5 – pH 8.5 approximately 97% of the time in 2025.
    - Elevated pH was intermittently recorded in July, August and September.
- Continuous water monitoring indicates that EC concentrations were below the adopted trigger value of 900 µS/cm in 2025.
    - The maximum daily EC result of 853 µS/cm occurred on 29 December 2025.
    - The daily average EC was 655.53 µS/cm for 2025.
- Monthly grab sample monitoring results for pH ranged between pH 7.64 – pH 8.2 for 2025 and within the adopted criteria of pH 6.5 – pH 8.5.
- Monthly grab sample monitoring results for EC ranged between 496 µS/cm – 786 µS/cm for 2025 and below the adopted trigger value of 900 µS/cm.
- Monthly grab sample monitoring results for TSS ranged between 2 mg/L – 47 mg/L for 2024.
    - One elevated TSS result was above the adopted criteria of 13mg/L:
        - On the 11 September 2025, a TSS of 47 mg/ was recorded, likely influenced by TSS upstream where SW01 recorded a TSS of 71mg/L. **SW01** is located in the Goulburn River upstream of operations, near the confluence of Moolarben Creek and Sportsman Hollow Creek.

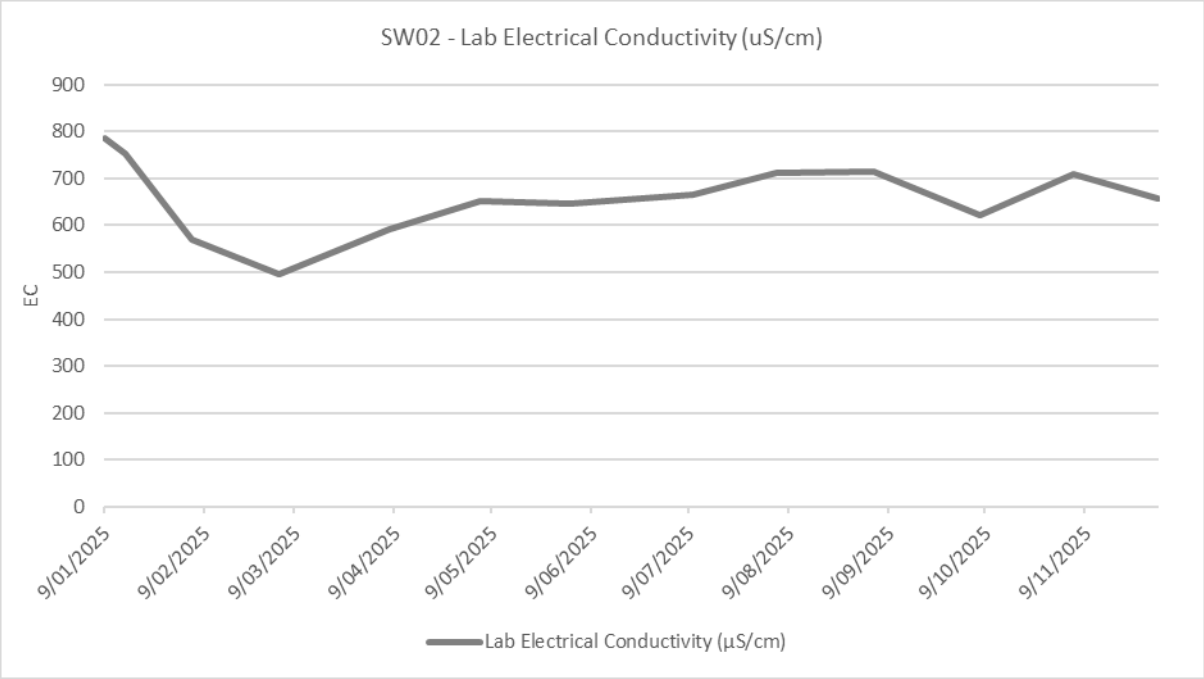


Figure 5-7 SW02 Downstream Goulburn River Monthly Grab Sample EC Results 2025

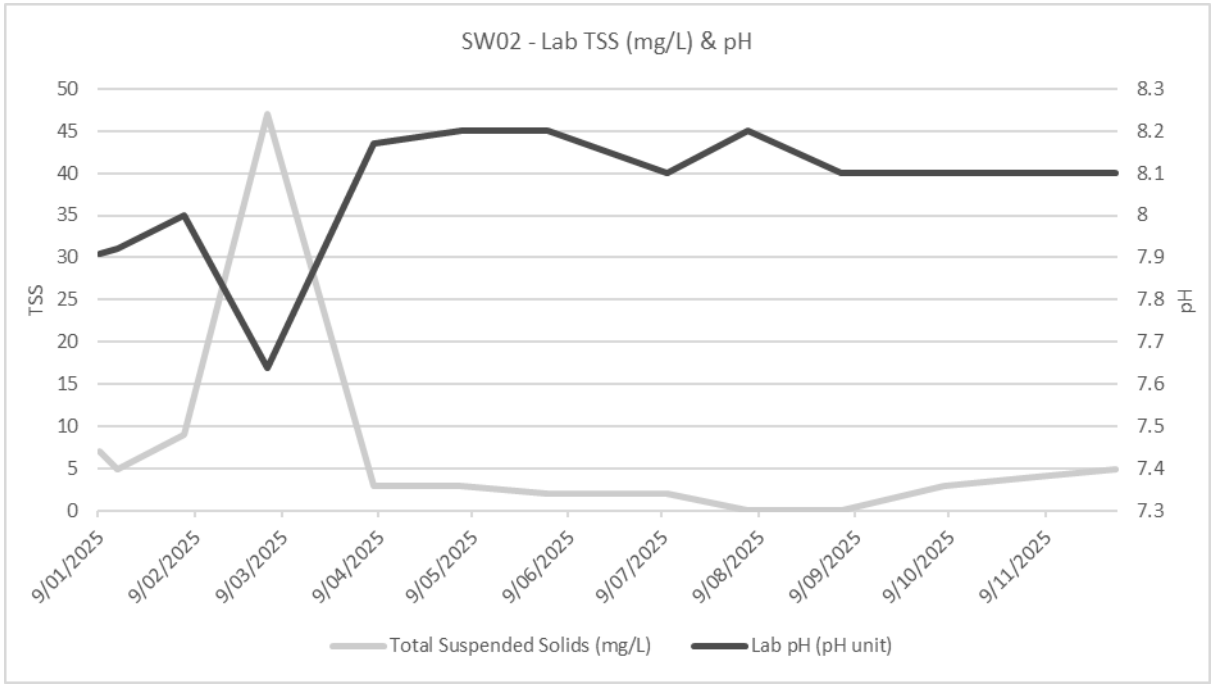


Figure 5-8 SW02 Downstream Goulburn River Monthly Grab Sample pH & TSS Results 2025

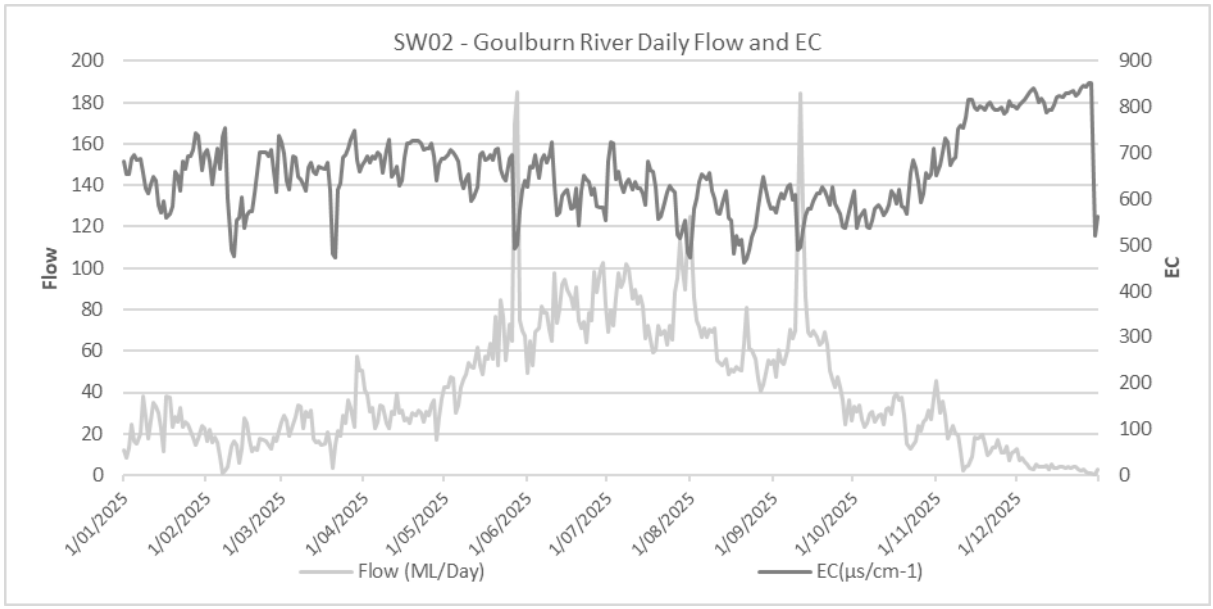


Figure 5-9 SW02 Downstream Goulburn River Real Time Flow & EC Results 2025

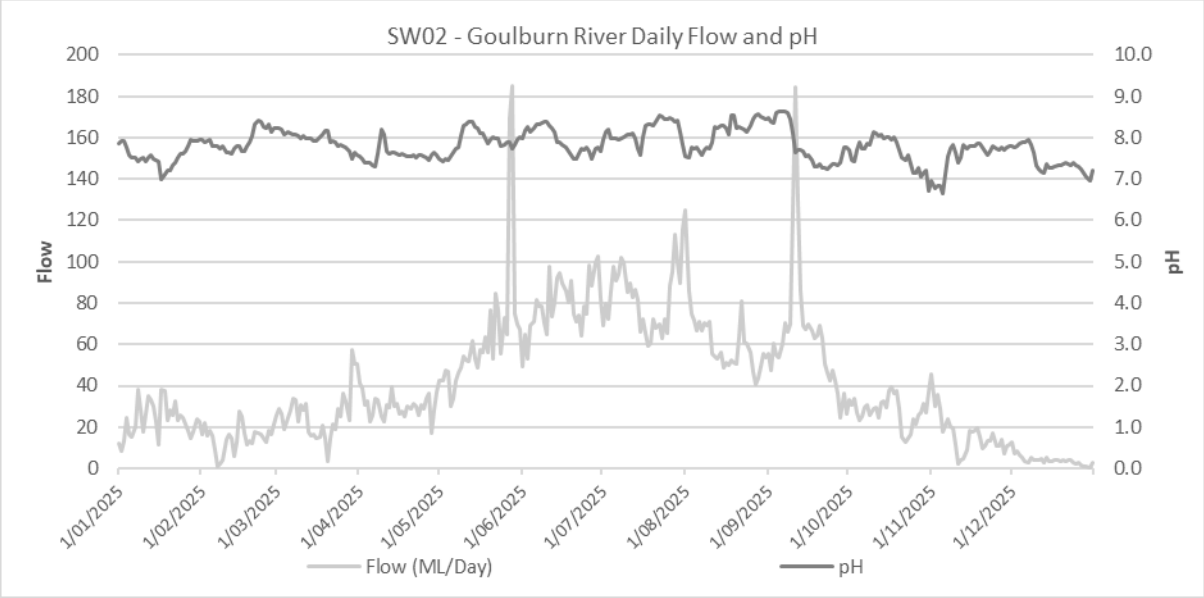


Figure 5-10 SW02 Downstream Goulburn River Real Time Flow & pH Results 2025

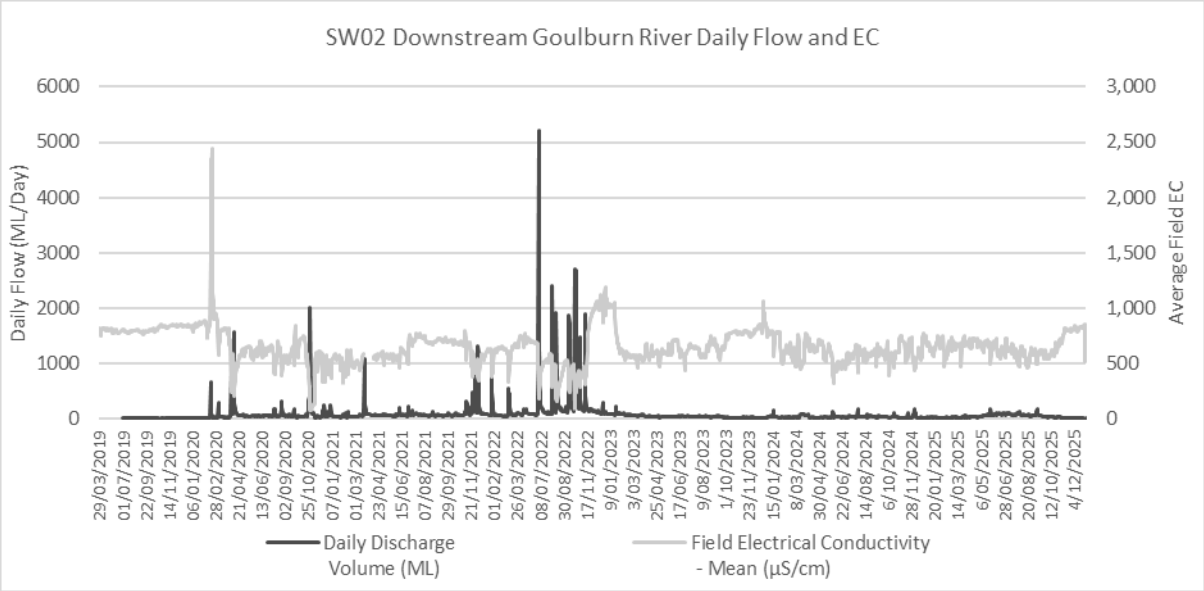


Figure 5-11 SW02 Downstream Goulburn River Historical Real Time Flow & EC (2019 - 2025)

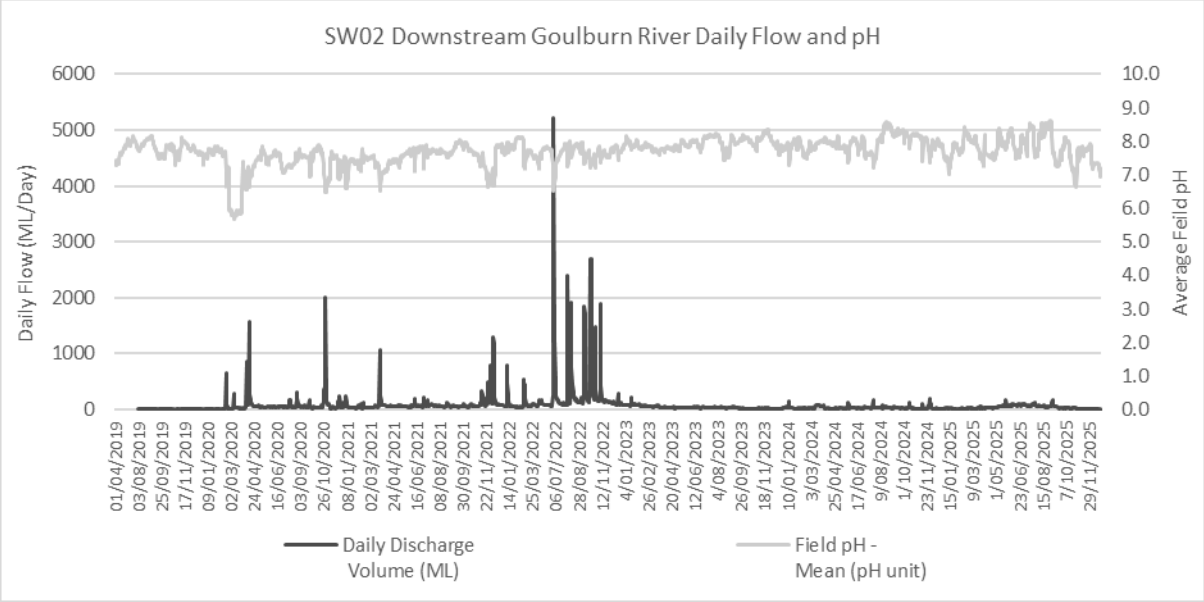


Figure 5-12 SW02 Downstream Goulburn River Real Time Historical Flow & pH (2019 - 2025)

5.2.1 SW02 Daily Average Results

	EC(µs/cm^{-1})	pH	Flow (ML/Day)
Min	462	6.64	0.57
Max	853	8.63	185.23
Average	655.53	7.80	41.38

Table 5-2 SW02 Daily Average Results

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
1/01/2025	682	7.85	12.215
2/01/2025	654	7.92	8.632
3/01/2025	654	7.91	13.263
4/01/2025	689	7.77	24.295
5/01/2025	695	7.57	16.613
6/01/2025	686	7.53	15.049
7/01/2025	689	7.51	19.891
8/01/2025	658	7.43	37.971
9/01/2025	624	7.48	28.162
10/01/2025	612	7.52	17.637
11/01/2025	633	7.41	26.326
12/01/2025	648	7.52	34.816
13/01/2025	641	7.57	33.013
14/01/2025	587	7.50	29.968
15/01/2025	571	7.46	22.901
16/01/2025	595	7.42	11.583
17/01/2025	558	7.00	38.201
18/01/2025	569	7.10	37.766
19/01/2025	584	7.21	22.980
20/01/2025	660	7.22	28.484
21/01/2025	652	7.34	25.783
22/01/2025	618	7.39	32.270
23/01/2025	683	7.51	23.329
24/01/2025	665	7.61	25.800
25/01/2025	694	7.62	24.202
26/01/2025	694	7.67	21.296
27/01/2025	706	7.81	18.160
28/01/2025	743	7.95	14.416
29/01/2025	739	7.92	17.904
30/01/2025	663	7.91	23.604
31/01/2025	698	7.96	22.913
1/02/2025	706	7.95	16.418
2/02/2025	683	7.90	22.084
3/02/2025	632	7.91	16.111
4/02/2025	674	7.94	18.514
5/02/2025	709	7.79	15.965

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
6/02/2025	666	7.79	8.839
7/02/2025	735	7.80	1.009
8/02/2025	754	7.72	2.067
9/02/2025	600	7.79	3.769
10/02/2025	489	7.65	13.666
11/02/2025	476	7.63	16.678
12/02/2025	555	7.61	14.296
13/02/2025	560	7.72	6.095
14/02/2025	605	7.79	12.951
15/02/2025	538	7.81	27.312
16/02/2025	566	7.67	24.975
17/02/2025	572	7.66	16.928
18/02/2025	574	7.79	11.638
19/02/2025	613	7.89	13.217
20/02/2025	657	8.04	11.927
21/02/2025	701	8.33	17.527
22/02/2025	701	8.42	17.206
23/02/2025	703	8.40	16.579
24/02/2025	692	8.27	14.824
25/02/2025	708	8.22	12.608
26/02/2025	661	8.33	18.314
27/02/2025	614	8.15	16.545
28/02/2025	738	8.22	21.360
1/03/2025	724	8.24	25.846
2/03/2025	698	8.24	28.694
3/03/2025	639	8.21	26.190
4/03/2025	621	8.06	18.927
5/03/2025	694	8.15	24.786
6/03/2025	691	8.1	28.096
7/03/2025	648	8.07	33.804
8/03/2025	644	8.06	33.070
9/03/2025	633	8.03	22.775
10/03/2025	617	7.99	30.566
11/03/2025	667	8.04	28.020
12/03/2025	678	7.99	31.243
13/03/2025	659	7.98	17.850
14/03/2025	655	7.97	15.997
15/03/2025	672	7.93	16.639
16/03/2025	669	7.93	14.455
17/03/2025	666	8.02	14.981
18/03/2025	678	8.09	20.767
19/03/2025	618	8.16	14.556
20/03/2025	481	8.17	3.411
21/03/2025	473	7.89	14.517
22/03/2025	622	7.91	21.507
23/03/2025	635	7.89	19.215

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
24/03/2025	690	7.81	28.577
25/03/2025	697	7.82	25.260
26/03/2025	709	7.8	36.118
27/03/2025	729	7.76	32.818
28/03/2025	748	7.66	23.208
29/03/2025	684	7.48	57.543
30/03/2025	659	7.64	50.412
31/03/2025	673	7.57	50.684
1/04/2025	682	7.54	41.266
2/04/2025	693	7.5	38.656
3/04/2025	679	7.4	30.619
4/04/2025	693	7.4	32.341
5/04/2025	689	7.39	22.821
6/04/2025	702	7.34	25.716
7/04/2025	697	7.29	33.925
8/04/2025	658	7.6	33.403
9/04/2025	706	8.2	25.439
10/04/2025	729	8.08	22.415
11/04/2025	650	7.67	30.617
12/04/2025	656	7.62	29.273
13/04/2025	671	7.63	39.230
14/04/2025	628	7.63	29.971
15/04/2025	641	7.60	31.414
16/04/2025	690	7.59	26.177
17/04/2025	722	7.60	27.560
18/04/2025	720	7.59	24.875
19/04/2025	728	7.54	30.298
20/04/2025	727	7.56	28.940
21/04/2025	727	7.58	31.334
22/04/2025	720	7.53	30.365
23/04/2025	707	7.59	25.909
24/04/2025	710	7.59	30.942
25/04/2025	709	7.54	28.699
26/04/2025	720	7.52	34.095
27/04/2025	692	7.47	36.040
28/04/2025	640	7.59	17.304
29/04/2025	676	7.65	28.024
30/04/2025	689	7.58	37.024
1/05/2025	689	7.49	42.452
2/05/2025	695	7.42	42.391
3/05/2025	706	7.49	47.212
4/05/2025	701	7.47	46.675
5/05/2025	692	7.56	30.393
6/05/2025	681	7.64	33.924
7/05/2025	644	7.74	42.467
8/05/2025	623	7.77	46.323

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
9/05/2025	642	8.05	48.942
10/05/2025	653	8.30	54.001
11/05/2025	595	8.33	52.685
12/05/2025	605	8.38	51.704
13/05/2025	627	8.38	61.783
14/05/2025	695	8.25	52.862
15/05/2025	702	8.24	48.791
16/05/2025	685	8.12	57.429
17/05/2025	687	8.11	56.105
18/05/2025	697	7.98	63.705
19/05/2025	684	7.86	56.100
20/05/2025	707	7.96	76.540
21/05/2025	711	8.00	53.170
22/05/2025	666	7.98	*84.479*
23/05/2025	649	7.97	76.600
24/05/2025	640	7.81	55.470
25/05/2025	689	7.83	73.098
26/05/2025	696	7.90	64.824
27/05/2025	493	7.90	169.721
28/05/2025	502	7.73	185.231
29/05/2025	576	7.82	74.795
30/05/2025	621	7.94	70.012
31/05/2025	641	8.02	66.990
1/06/2025	626	7.97	49.029
2/06/2025	671	8.17	65.029
3/06/2025	669	8.26	53.101
4/06/2025	697	8.14	69.294
5/06/2025	646	8.24	71.056
6/06/2025	684	8.33	81.649
7/06/2025	696	8.33	78.614
8/06/2025	680	8.35	78.140
9/06/2025	693	8.38	70.518
10/06/2025	725	8.38	64.596
11/06/2025	631	8.28	97.377
12/06/2025	565	8.23	73.199
13/06/2025	571	8.15	80.302
14/06/2025	608	7.88	92.206
15/06/2025	615	7.88	94.524
16/06/2025	622	7.82	89.769
17/06/2025	578	7.78	85.886
18/06/2025	582	7.67	80.233
19/06/2025	624	7.59	90.587
20/06/2025	543	7.49	74.981
21/06/2025	619	7.50	71.037
22/06/2025	652	7.62	74.023
23/06/2025	644	7.73	64.154

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
24/06/2025	638	7.70	78.155
25/06/2025	609	7.76	74.556
26/06/2025	623	7.68	98.206
27/06/2025	584	7.50	88.629
28/06/2025	583	7.73	99.435
29/06/2025	582	7.77	102.530
30/06/2025	555	7.66	82.111
1/07/2025	681	7.96	69.366
2/07/2025	724	8.15	79.486
3/07/2025	722	8.19	72.452
4/07/2025	642	7.97	86.153
5/07/2025	659	7.99	97.801
6/07/2025	631	7.99	90.640
7/07/2025	614	7.95	93.814
8/07/2025	636	7.99	101.972
9/07/2025	644	8.02	99.650
10/07/2025	622	8.07	85.315
11/07/2025	637	8.09	89.727
12/07/2025	623	8.10	82.905
13/07/2025	623	7.99	86.369
14/07/2025	613	7.74	81.232
15/07/2025	588	7.57	65.753
16/07/2025	681	8	72.038
17/07/2025	662	8.28	65.430
18/07/2025	659	8.33	59.233
19/07/2025	625	8.31	60.600
20/07/2025	556	8.3	72.519
21/07/2025	563	8.38	67.755
22/07/2025	592	8.54	69.994
23/07/2025	616	8.52	62.767
24/07/2025	630	8.45	72.218
25/07/2025	621	8.46	65.429
26/07/2025	615	8.47	88.659
27/07/2025	524	8.46	95.204
28/07/2025	514	8.38	113.349
29/07/2025	535	8.43	99.395
30/07/2025	555	8.13	89.474
31/07/2025	485	7.84	115.713
1/08/2025	474	7.56	124.791
2/08/2025	578	7.52	85.923
3/08/2025	602	7.75	74.751
4/08/2025	638	7.72	71.763
5/08/2025	653	7.77	66.398
6/08/2025	648	7.67	70.794
7/08/2025	642	7.57	66.695
8/08/2025	656	7.70	70.135

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
9/08/2025	617	7.77	69.320
10/08/2025	600	7.74	70.994
11/08/2025	570	7.89	55.235
12/08/2025	567	8.26	54.556
13/08/2025	589	8.24	53.130
14/08/2025	617	8.29	55.861
15/08/2025	559	8.29	48.547
16/08/2025	554	8.23	50.937
17/08/2025	482	8.08	50.119
18/08/2025	521	8.55	52.669
19/08/2025	502	8.54	50.887
20/08/2025	511	8.23	50.580
21/08/2025	462	8.26	63.386
22/08/2025	471	8.24	81.221
23/08/2025	489	8.21	60.860
24/08/2025	517	8.13	60.632
25/08/2025	539	8.28	55.856
26/08/2025	583	8.46	47.012
27/08/2025	617	8.55	40.715
28/08/2025	648	8.56	43.798
29/08/2025	620	8.51	49.460
30/08/2025	596	8.49	55.726
31/08/2025	579	8.44	53.761
1/09/2025	583	8.49	55.356
2/09/2025	571	8.39	47.517
3/09/2025	597	8.35	60.541
4/09/2025	612	8.60	55.086
5/09/2025	600	8.63	53.350
6/09/2025	626	8.62	60.751
7/09/2025	632	8.63	70.441
8/09/2025	598	8.59	66.293
9/09/2025	609	8.45	69.675
10/09/2025	489	8.12	123.895
11/09/2025	495	7.64	184.300
12/09/2025	535	7.70	129.058
13/09/2025	566	7.71	85.760
14/09/2025	578	7.66	69.263
15/09/2025	579	7.56	67.579
16/09/2025	596	7.57	70.068
17/09/2025	612	7.44	66.631
18/09/2025	612	7.31	63.088
19/09/2025	625	7.30	63.908
20/09/2025	619	7.35	68.872
21/09/2025	604	7.27	62.662
22/09/2025	588	7.26	50.494
23/09/2025	625	7.24	46.289

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
24/09/2025	589	7.29	42.273
25/09/2025	580	7.35	47.386
26/09/2025	569	7.37	42.726
27/09/2025	541	7.33	36.555
28/09/2025	537	7.40	24.400
29/09/2025	573	7.75	36.596
30/09/2025	597	7.75	26.514
1/10/2025	617	7.71	33.157
2/10/2025	537	7.44	30.927
3/10/2025	560	7.42	33.772
4/10/2025	569	7.69	26.842
5/10/2025	576	7.89	23.156
6/10/2025	539	7.74	25.139
7/10/2025	537	7.74	29.171
8/10/2025	553	7.87	30.488
9/10/2025	580	7.84	25.799
10/10/2025	587	8.13	28.975
11/10/2025	580	8.12	29.299
12/10/2025	564	8.04	24.728
13/10/2025	574	8.06	31.641
14/10/2025	586	7.97	32.682
15/10/2025	619	8.02	29.686
16/10/2025	610	8.02	37.296
17/10/2025	590	7.94	39.589
18/10/2025	621	8.00	36.223
19/10/2025	584	7.89	37.426
20/10/2025	581	7.71	28.666
21/10/2025	568	7.51	15.258
22/10/2025	656	7.44	13.038
23/10/2025	686	7.59	14.695
24/10/2025	669	7.37	16.717
25/10/2025	638	7.16	23.771
26/10/2025	593	7.15	21.389
27/10/2025	611	7.26	25.775
28/10/2025	656	7.06	26.861
29/10/2025	647	7.13	31.371
30/10/2025	654	7.21	27.120
31/10/2025	709	6.70	37.173
1/11/2025	651	6.97	45.386
2/11/2025	674	6.78	30.344
3/11/2025	703	6.85	35.423
4/11/2025	731	6.85	28.940
5/11/2025	725	6.64	17.758
6/11/2025	674	7.12	20.625
7/11/2025	686	7.55	23.835
8/11/2025	690	7.73	20.371

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
9/11/2025	753	7.82	19.418
10/11/2025	761	7.63	11.737
11/11/2025	755	7.40	1.992
12/11/2025	776	7.52	4.092
13/11/2025	815	7.83	4.564
14/11/2025	816	7.73	9.266
15/11/2025	798	7.80	18.296
16/11/2025	794	7.80	17.621
17/11/2025	803	7.79	18.564
18/11/2025	799	7.87	19.488
19/11/2025	795	7.87	15.519
20/11/2025	806	7.75	9.343
21/11/2025	810	7.66	10.991
22/11/2025	798	7.57	13.362
23/11/2025	793	7.68	13.632
24/11/2025	795	7.79	16.872
25/11/2025	798	7.72	11.014
26/11/2025	784	7.71	11.053
27/11/2025	790	7.75	13.681
28/11/2025	813	7.70	7.294
29/11/2025	803	7.77	10.844
30/11/2025	802	7.80	11.371
1/12/2025	797	7.81	12.628
2/12/2025	805	7.75	7.209
3/12/2025	811	7.80	8.358
4/12/2025	816	7.87	6.245
5/12/2025	823	7.90	5.281
6/12/2025	833	7.88	3.673
7/12/2025	840	7.94	2.839
8/12/2025	829	7.84	5.215
9/12/2025	811	7.63	3.881
10/12/2025	819	7.32	3.843
11/12/2025	810	7.23	4.161
12/12/2025	787	7.19	4.748
13/12/2025	793	7.16	2.683
14/12/2025	794	7.35	5.394
15/12/2025	806	7.28	3.310
16/12/2025	822	7.27	3.408
17/12/2025	825	7.31	4.099
18/12/2025	822	7.32	3.788
19/12/2025	829	7.33	3.714
20/12/2025	829	7.36	3.758
21/12/2025	833	7.38	3.216
22/12/2025	835	7.37	4.316
23/12/2025	824	7.34	3.755
24/12/2025	829	7.38	2.870

Date	EC(µs/cm^{-1})	pH	Flow (ML/Day)
25/12/2025	842	7.33	2.506
26/12/2025	846	7.31	2.556
27/12/2025	845	7.24	1.610
28/12/2025	851	7.16	0.889
29/12/2025	853	7.05	0.703
30/12/2025	519	6.96	0.566
31/12/2025	561	7.22	2.850

6. Flow Sampling Creek Lines

SW03 is located in Ulan Creek, upstream from all of the LDP6 and sampled at a semi-permanent pool within the creek. Ulan Creek is a fourth order stream flowing in a southerly then easterly direction, through the Project Approval boundary before joining the Goulburn River. Ulan Creek is an ephemeral creek system with flows occurring during storm events or after prolonged rainfall. Downstream from SW03, creek flows are augmented by discharge from LDP6. The results from surface water monitoring at SW03 (**Table 4-2**) indicate:

- There were 4 sampling events during 2025.
- EC remained below the adopted criteria of 1440 µS/cm during 2025.
- TSS results remained below the adopted criteria of 18mg/L during 2025.
- There were three consecutive monthly results outside of the adopted criteria of pH 6.5 – pH 8.1 during 2025 where the pH was above pH 8.1 in July, August, September.

Surface Water TARP Triggered in accordance with the WMP, UCMPL commenced investigations to determine if the trigger exceedance is mining related or not. Engeny Australia Pty Ltd (Engeny) was engaged by UCMPL to assist with a review of elevated pH values in water quality results at the monitoring site SW03 in Ulan Creek (*SW03 Water Quality Trigger Review by Engeny, August 2025*).

Water Quality Findings:

Water quality monitoring data indicates that water quality at the site is highly variable with a large range between minimum and maximum values.

Review of pH and EC trends show fluctuations in water quality in response to flow conditions where the values typically decrease during and following periods of high flow, and increase during times of low flow. Increases in pH during low flow conditions could be the result of increased CO2 removal from the water as a result of the reduced water surface area (i.e. less CO2 uptake from the surrounding air), CO2 consumption as a result of plant growth (as observed as SW03, refer to Section 2) leading to higher pH values and/or ponded water leading to increased mineral leaching from the soil and rocks at the SW03 location (as a result of the prolonged contact time). Increases in EC during low flow conditions could be due to increased dissolved salt concentrations (as reflected by the similarities between the EC and TDS trends, refer to Section 3.2) as a result of evapoconcentration (Engeny, 2025).

Proposed SW03 Trigger Value Changes:

Due to the ephemeral nature of Ulan Creek use of the 20th and 80th percentile statistics as water quality trigger values is considered inappropriate (as per ANZG (2020) guidance). It is likely that adoption of the 20th and 80th percentile values of historic data does not adequately represent natural water quality variability in the creek due to the highly variable flow conditions observed/gauged at the SW03 location. It is considered that calculation of the water quality trigger value using the 95th percentile is more appropriate to account for the range of water quality results under different meteorological and flow conditions while still enabling elevated values to be identified (as opposed to complete removal of the triggers). Similarly, it is proposed that the lower limit of the pH trigger value be derived using the 5th percentile value of historic monitoring data as opposed to adoption of the default ANZECC (2000) upland river default guideline value. The proposed trigger values are provided

in Table 4.1. As noted in the ANZECC (2000) guidelines and WMP, when results are within the trigger range it is considered a low risk to environmental values and when values fall outside of the trigger range, further action is required to investigate and address the cause.

It is proposed that investigations of elevated values continue to be carried out in accordance with the Surface Water TARP for the Goulburn River System provided in Table 6-1 of the UCMPL WMP (UCMPL, 2024) and that a water quality investigation should be triggered when three consecutive monthly monitoring results are reported above the trigger values for EC and/or Total Suspended Solids (TSS) or outside of the range for pH.

Due to the location of SW03 downstream of mine features and the ephemeral nature of Ulan Creek in the upper reaches, between SW03 and the downstream monitoring locations, SW03 is not considered suitable for use as an upstream reference monitoring location for water quality in the creek. It is considered that, monitoring at the SW03 monitoring location should continue but the water quality data should only be used for comparison to downstream monitoring location water quality data when there are flows in the creek (i.e. no ponding and dry areas between the monitoring locations). SW03 should not be considered an upstream reference site but can be used to assess impacts at the SW03 location (e.g. seepage from Bobadeen Dam or Blend Dam) (Engeny, 2025).

SW04 is located in Ulan Creek approximately 3.7 km downstream from LDP6 at Old Ulan. Excluding significant rain events, water flows at SW04 are augmented entirely by discharges from LDP6. The results from surface water monitoring at SW04 (**Table 4-2**) indicate:

- There were 12 sampling events during 2025.
- EC remained below the adopted criteria of 900 µS/cm during 2025.
- One elevated TSS was above the adopted criteria of 47 mg/L during 2025. A TSS reading of 111 mg/L was recorded on the 1 December 2025.
- One elevated pH results above the adopted criteria of pH 6.5 – pH 8.5 during 2025. pH 8.6 was recorded on the 11 September 2025.

SW05 is located in Ulan Creek approximately 4 km downstream from SW04 at an internal causeway crossing. SW05 is approximately 900 m upstream of LDP19 and approximately 2 km from Goulburn River confluence. Excluding significant rain events, water flows at SW05 are augmented entirely by discharges from LDP6. The results from surface water monitoring at SW05 (**Table 4-2**) indicate:

- There were 13 sampling events during 2025.
- pH remained within the adopted criteria of pH 6.5 – pH 8.5 during 2025.
- TSS remained below the adopted criteria of 18 mg/L during 2024.
- EC remained below the adopted criteria of 900 µS/cm during 2025.

SW06 is located in Spring Gully (off Pleuger Road) and is a second order, ephemeral stream passing through remote bushland in the eastern section of the Project Approval boundary. Spring Gully joins Bobadeen Creek outside the Project Approval boundary, approximately 350 m upstream of its confluence with the Goulburn River:

- There were no available water samples during 2025. Dry at the time of the monthly event sampling.

SW07 is located in Bobadeen Creek, a fourth order stream flowing through cleared grazing land in the north-eastern section of the Project Approval boundary. The creek flows in a south-easterly direction towards the Goulburn River. The creek is ephemeral and generally experiences low flows, with pools of permanent or semi-permanent water present in the downstream reaches:

- There were no available water samples during 2025. Dry at the time of the monthly event sampling.

SW08 is located at the upper reach of Curra Creek, a third order, ephemeral stream, which flows only during storm events or after prolonged rainfall, typically in a southerly direction in the very north-eastern section of the Project Approval boundary, upstream of the influence of mining activities, before joining with Bobadeen Creek:

- There were no available water samples during 2025. Dry at the time of the monthly event sampling.

SW09 is located in the Talbragar River, a Category 3 stream and a tributary of the Macquarie River on the western side of the Great Dividing Range, within the Murray-Darling Basin catchment. The Talbragar River flows in a south-westerly direction across the north-western corner of the Project Approval boundary area and outside mining activities.

- There were 11 sampling events during 2024.
- Monthly grab sample monitoring results for pH ranged between pH 8.0 – pH 8.6 for 2025.
- Monthly grab sample monitoring results for EC ranged between 264 µS/cm – 1070 µS/cm for 2025.
- Monthly grab sample monitoring results for TSS ranged between 29 mg/L – 182 mg/L for 2025. The 182mg/L TSS result on the 5/08/2025 may likely been influenced by approximately 44mm rainfall in the days prior to the sampling event.

SW10 is located within Mona Creek, a fourth order, ephemeral stream which flows through cleared grazing land in the north-western section of the Project Approval boundary, in a north-westerly direction, towards the Talbragar River. Flows in Mona Creek are triggered during storm events or after prolonged rainfall and pools of permanent or semi-permanent water are present in the downstream reaches.

- There were no available water samples during 2025. Dry at the time of the monthly event sampling.

SW11 is located in Cockabutta Creek, a second order, ephemeral stream, which is not subject to the influence of mining activities, flowing in a westerly direction towards the Talbragar River, passing through bushland and rural allotments in the western section of the Project Approval boundary.

- There were no available water samples during 2025. Dry at the time of the monthly event sampling.

7. Flow Sampling Clean Water Diversion Drain and System

SW12 is located in the Clean Water Diversion System, a drain that captures the runoff from rehabilitated land around the mine operations. The water is not subject to the influence of mining activities and flows into and remains in Peanut Dam.

- There was one sampling event during 2025.
- The recorded 7.7 pH remained within the adopted criteria of pH 6.5 – pH 8.5 during 2025.
- The recorded 282 µS/cm remained below the adopted criteria of 900 µS/cm during 2025.
- The recorded 38mg/L remained below the adopted criteria of 50 mg/L during 2025.

SW13 is located in the Clean Water Diversion Drain, a drain that captures the runoff from rehabilitated land around the mine operations. The water is not subject to the influence of mining activities and flows into a tributary of Ulan, then flows into Ulan Creek and then flows into the Goulburn River.

- There were no available water samples during 2025. Dry at the time of the monthly event sampling.

SW14 is located in the Clean Water Diversion Drain, a drain that captures the runoff from rehabilitated land around the mine operations. The water is not subject to the influence of mining activities and flows into a tributary of Ulan, then flows into Ulan Creek and then flows into the Goulburn River.

- There were no available water samples during 2025. Dry at the time of the monthly event sampling.

SW15 is located in the Clean Water Diversion System, a drain that captures the runoff from rehabilitated land around the mine operations. The water is not subject to the influence of mining activities and flows into and remains in Peanut Dam.

- There were no available water samples during 2025. Dry at the time of the monthly event sampling.

SW16 is located in the Clean Water Diversion System, a drain that captures the runoff from rehabilitated land around the mine operations. The water is not subject to the influence of mining activities and flows into and remains in Peanut Dam.

- There were no available water samples during 2025. Dry at the time of the monthly event sampling.

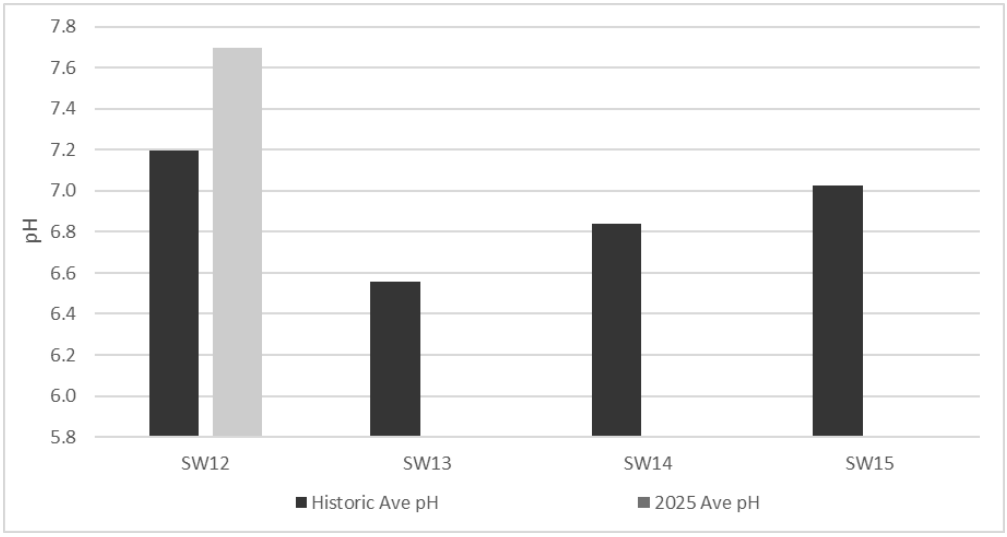


Figure 7-1 Comparison 2025 to Historical Average pH Monitoring Results

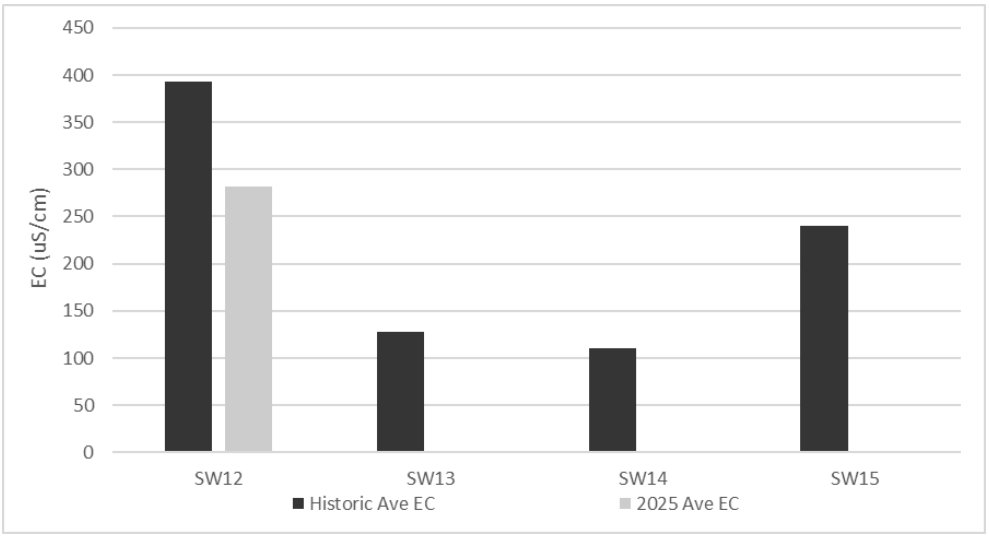


Figure 7-2 Comparison 2025 to Historical Average EC Monitoring Results

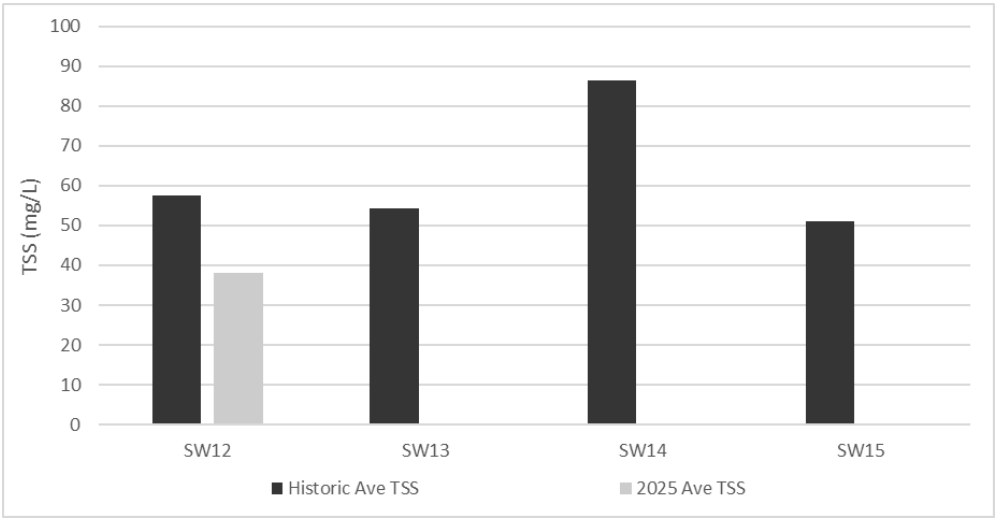
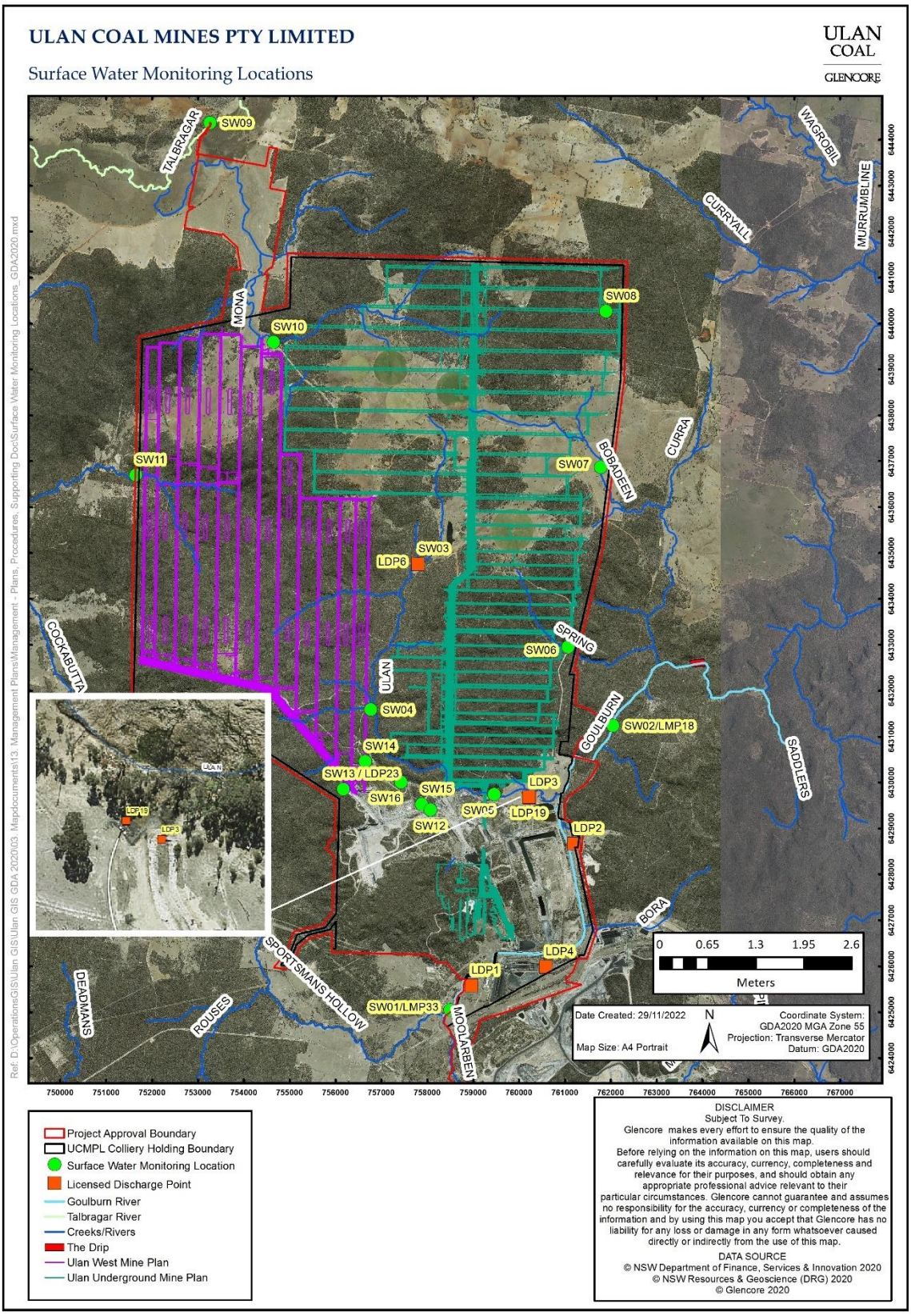


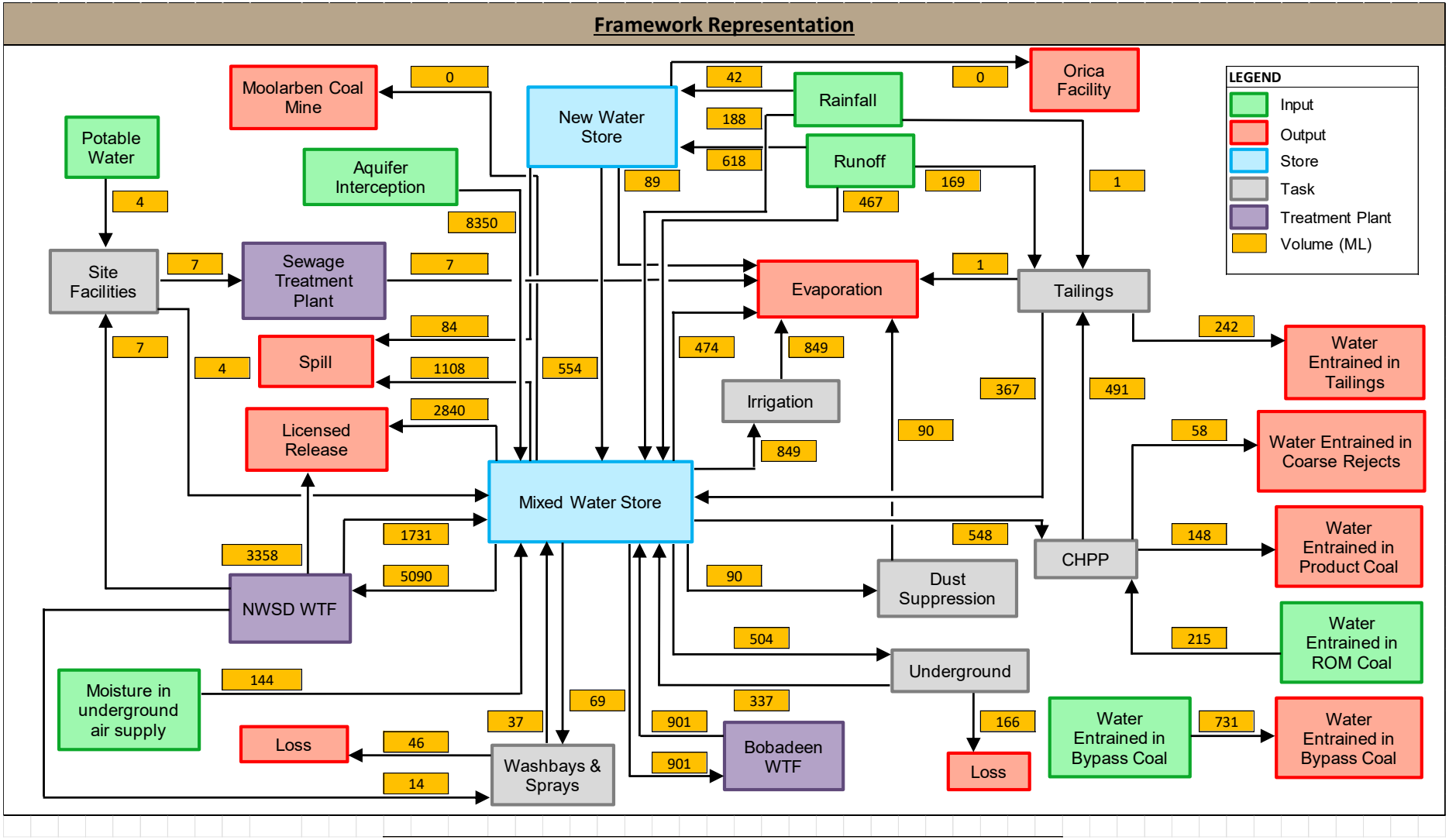
Figure 7-3 Comparison 2025 to Historical Average TSS Monitoring Results

Notes: No flows at the time of the monthly surface water event sampling in 2025 for SW013, SW014 & SW15

8. Surface Water Monitoring Locations



9. Water Framework Representation



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